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Subject:

**Written Description/Sufficiency of Disclosure
Case Studies**

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(NOTE)

1. In this case study, the purpose of the judgement by users and IP5 Offices focused on clarity and support requirement of claims.

2. It reflects only a "snapshot" assessment, i.e. an assessment of the specifics outlined in the hypothetical cases, which is not representative enough to allow for valid general conclusions.

3. The result and summary of this case study have only indicative meanings, and are NOT legally binding on IP5 Offices.

1. Case 1

(1) Hypothetical Case

Case 1

[Claims]

1. A composition, which comprises, as a principal ingredient, A and one or more selected from the group consisting of B, C, and D and is a powder having an average L/D of 3.0 or lower, a bulk density of 0.80 g/mL or lower, and a repose angle of 60 degree or smaller.

[Description]

The average L/D is closely related to powder fluidity of a composition. When a composition with an average L/D of 3.0 or lower is used as a powder component, a powder with excellent powder fluidity can be obtained. This average L/D is preferably 1.8 or lower. A lower average L/D is more preferable because the fluidity of a composition is improved. Therefore, the lower limit thereof is not particularly limited, but the range of usually obtained average L/D is 1.0 or higher.

When the bulk density of the composition is 0.80 g/mL or lower, the compression moldability becomes favorable in addition to the above-described powder fluidity. The bulk density is preferably 0.45 g/mL or lower. The bulk density of a composition having excellent powder fluidity is preferably 0.05 g/mL or higher.

Since the composition has excellent fluidity when the repose angle is 60 degree or smaller, uniform dispersibility is improved when the composition is mixed with other components. The repose angle is preferably 45 degree or smaller. The above-described effects are increased with a smaller repose angle. Therefore, the lower limit thereof is not particularly limited but the range that can be obtained by a simple procedure is 10 degree and higher.

[Examples]

In the Examples, the following are disclosed: in Example 1, average L/D 1.7, bulk density 0.43g/mL, and repose angle 43 degrees; in Example 2, average L/D 2.3, bulk density 0.54g/mL, and repose angle 48 degrees; and in Example 3, average L/D 2.5, bulk density 0.51g/mL, and repose angle 55 degrees.

Issues to be Considered

In the patent claim, a specific parameter range of 60 degrees or less is written, in other words, a parameter range from 0 to 60 degrees. However, the Examples disclose only the composition having a repose angle from 43 to 60 degrees. In other words, there is no disclosed composition having a parameter range of less than 43 degrees. Also, in the description, the lower limit of each parameter is mentioned.

Should the claimed invention be determined to be described in the description? Or, based on the fact that, in the Example, only a part of the parameters for the powder is disclosed, should it be determined not to be described in the description?

When determining that, are any conditions required?

1. Case 1

(2) Case Study by IP5 Offices

Case Study 1 on Hypothetical Case

Name of Office:EPO

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

Guidelines F-IV, 6.3 state that “generally, a claim should be regarded as supported by the description unless there are well-founded reasons for believing that the skilled person would be unable, on the basis of the information given in the application as filed, to extend the particular teaching of the description to the whole of the field claimed by using routine methods of experimentation or analysis”.

Furthermore, “the examiner should raise an objection of lack of support only if he has well-founded reasons. Once the examiner has set out a reasoned case that, for example, a broad claim is not supported over the whole of its breadth, the onus of demonstrating that the claim is fully supported lies with the applicant (see F-IV, 4). Where an objection is raised, the reasons should, where possible, be supported specifically by a published document”.

The repose angle parameter appears to be largely the result of the composition and L/D ratio (see also point 2 below) which the skilled person can influence and which are already to some extent defined in the claim. In this case, in addition, there is no document showing that the skilled person would be unable to extend the teaching. So presently, it seems difficult to supply well-founded reasons for an objection of lack of support (Art. 84 EPC).

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements.

It is noted that both L/D and repose angle relate to the fluidity, the L/D likely being the cause and the repose angle presumably being the quantification of fluidity. It is possible that if L/D is closer to 1 than currently exemplified, also the repose angle will still considerable decrease with respect to what is exemplified. So there is some indication on what the skilled person can do to further decrease the repose angle with respect to the examples. The nature of A, B, C and D may also affect the fluidity in a manner which could in principle be known or predictable to the skilled person. As a result, there appear to be no well-founded technical reasons to object to the absence of a lower limit of the repose angle under Art. 84 EPC, lack of support.

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

Case Study 1 on Hypothetical Case

Name of Office: JPO

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

Under Article 36(6)(i) of the Japanese Patent Act, claimed inventions shall not go beyond the scope of disclosure in the description. If inventions, which are not stated in the description, are recited in the claims, patent rights may be granted to these inventions that are not disclosed. The requirement stipulated in Article 36(6)(i), so-called support requirement, is provided for to prevent such a situation.

The JPO’s examiner is to determine whether or not the claimed invention meets the support requirement, by reviewing substantial correspondence between the claimed invention and an invention that is stated in the description. Such review on this substantial correspondence is conducted by checking whether or not, the claimed invention goes beyond the “extent of disclosure in the description to which a person skilled in the art would recognize that the problem to be solved by the invention would be actually solved.” When it is determined that the claimed invention goes beyond such an extent, it cannot be said that the claimed invention substantially corresponds to an invention that is stated in the description. As a result, the statement in the claim does not meet the support requirement. (See 2. in the Examination Guidelines, Part II, Chapter 2, “Section 2 Support Requirement”)

The JPO is to review the following, on the premise that, based on the statements in the description, problems to be solved by the invention disclosed are to provide a composition having excellent powder fluidity, compression moldability, and uniform dispersibility.

In Claim 1, three parameters (“average L/D”, “bulk density”, and “repose angle”) are recited to define the claimed composition, and only their upper limits are identified as being in the form of “xx or lower/smaller”.

Among these parameters, with regard to the “average L/D,” the technical significance of the claimed upper limit is explicitly stated in the description, which states that “[w]hen a composition with an average L/D of 3.0 or lower is used as a powder component, a powder with excellent powder fluidity can be obtained.” The description also mentions the lower limits, stating that “[a] lower average L/D is more preferable because the fluidity of a composition is improved. Therefore, the lower limit thereof is not particularly limited.” In addition, in light of the common general knowledge, it is obvious for a person skilled in the art that a lower average L/D leads to more excellent fluidity. Furthermore, those

statements in the descriptions are supported by Examples 1-3, in which the average L/Ds are from 1.7 to 2.5, in a way enabling such a person to understand them.

As for the “repose angle”, the description indicates that “[s]ince the composition has excellent fluidity when the repose angle is 60 degree or smaller, uniform dispersibility is improved when the composition is mixed with other components. The repose angle is preferably 45 degree or smaller. The above-described effects are increased with a smaller repose angle. Therefore, the lower limit thereof is not particularly limited.” In light of the common general knowledge, it is obvious for a person skilled in the art that a smaller repose angle leads to more excellent fluidity and uniform dispersibility. Also, those statements are supported by Examples 1-3, in which the repose angles are from 43 to 55 degrees.

A bulk density is stated in the description as “[w]hen the bulk density of the composition is 0.80 g/mL or lower, the compression moldability becomes favorable in addition to the above-described powder fluidity. The bulk density is preferably 0.45 g/mL or lower.” This means that, by lowering a bulk density, not only the powder fluidity but also the compression moldability become favorable. Further, the description states that “[t]he bulk density of a composition having excellent powder fluidity is preferably 0.05 g/mL or higher.” In light of the common general knowledge, a person skilled in the art would recognize based on those statements that, when the average L/D and the repose angle are within the ranges recited in Claim 1, the powder fluidity would be achieved enough to solve the technical problem, even though the bulk density is lower than the lower limit mentioned as a preferable one in the description. Accordingly, it can be said that the description states that, even when the bulk density is lower than the lower limit mentioned in the description, the above-mentioned problem to be solved would be actually solved, in such a way that a person skilled in the art would recognize that.

Based on the above, the claimed invention meets the support requirement because it does not go beyond the “extent of disclosure in the description to which a person skilled in the art would recognize that the problem to be solved by the invention would be actually solved.”

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

Bases for the JPO's determination include: statements in the description about average L/D, repose angle, and bulk density and their Examples, as pointed out in (1).

In addition, based on the common general knowledge, a person skilled in the art needs to recognize that, even if the bulk density is lower than 0.05g/mL, the problem would be solved.

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

Case Study 1 on Hypothetical Case

Name of Office: KIPO

1. Does the invention written in the claim meet the support requirements?

- Yes
 No
 Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

Patent Act Article 42(4)(1) stipulates “The claims shall be supported by the description.” and the Patent Examination Guidelines Chapter 2 Section 4.3 states “Whether a claimed invention is supported by the description shall be determined based on a view of a person skilled in the art on whether the matters corresponding to claimed invention are stated in the description. Whether the corresponding matters are stated in the description shall be determined by thoroughly reviewing whether an invention, which is beyond the scope for a person skilled in the art to understand through the description, is claimed, considering the purport of Article 42(4)(1) of the Patent Act rather than literal identicalness between the claim and the description.” .

In this case, the description explicitly states the claimed numerical ranges of average L/D, bulk density and repose angle and provides several working examples. Therefore, it is obvious to a person skilled in the art that features written in the claim with the numerical ranges are supported by the statements of the description.

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

The description explicitly states the elements with the numerical ranges: average L/D of 3.0 or lower, bulk density of 0.80 g/mL or lower and repose angle of 60 degree or smaller. Furthermore, several working examples within the numerical ranges are indicated. Although there are no working examples disclosing a range of less than 43 degrees, the statements in the description and indicated working examples are sufficient to meet the support requirements.

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

Case Study 1 on Hypothetical Case

Name of Office: SIPO

1. Does the invention written in the claim meet the support requirements?

- Yes
 No
 Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

[Guidelines for Patent Examination Part II, Chapter 2, Section 3.2.1](#) for “Support in the Description” stipulate that “When determining whether a claim is supported by the description, the examiner shall take into account the whole contents of the description, rather than merely the contents in the part of specific mode for carrying out the invention. If other parts of the description also include contents concerning embodiments or examples, and it can be established the generalization of the claim is appropriate viewed from the whole contents of the description, then the claim shall be considered to have support in the description”. Therefore “a repose angle of 60 degree or smaller” defined in claim 1 is determined to meet the requirement of “Support in the Description” according to the guidelines stated above.

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

In regard to “a repose angle of 60 degree or smaller” written in the claim, the examples disclose only the composition having a repose angle from 43 to 60 degrees. Nevertheless in other parts of the description, it describes that “Since the composition has excellent fluidity when the repose angle is 60 degree or smaller, uniform dispersibility is improved when the composition is mixed with other components. The repose angle is preferably 45 degree or smaller. The above-described effects are increased with a smaller repose angle. Therefore, the lower limit thereof is not particularly limited but the range that can be obtained by a simple procedure is 10 degree and higher”. It clearly gives the information that the smaller of the repose angle the better. In addition, it is recognized to be common general technical knowledge that the smaller the repose angel is, the more excellent fluidity the composition would have. Although there is no example for composition having a repose angle of less than 43 degrees, it is easy for a person skilled in the art to determine or evaluate the effect beforehand. Therefore “a repose angle of 60 degree or smaller” in the claim can be supported by the description.

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

Case Study 1 on Hypothetical Case

Name of Office: USPTO

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

35 U.S.C. 112(a) provides that the “specification shall contain a written description of the invention...” The Manual of Patent Examining Procedure (MPEP) §2163 provides that in order “to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed”. It is well accepted that a satisfactory description may be in the claims or any other portion of the originally filed specification. Further an applicant can show possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention. Possession may be shown in a variety of ways including description of an actual reduction to practice, or by showing that the invention was “ready for patenting” such as by the disclosure of drawings or structural chemical formulas that show that the invention was complete, or by describing distinguishing identifying characteristics sufficient to show that the applicant was in possession of the claimed invention. At the USPTO, there is a presumption that an adequate written description of the claimed invention is present when the application is filed, and therefore, the Office has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize the written description of the invention as providing adequate support for the claimed invention. MPEP §2163.

In this situation, a person having ordinary skill in the art could reasonably conclude that the inventor had possession of the invention of a composition which is a powder having a repose angle of 60 degrees or smaller. This is supported in the specification in paragraph 3, which states that “the composition has excellent fluidity when the repose angle is 60 degrees or smaller...” This language demonstrates identifying characteristics sufficient to show that the applicant was in possession of the claimed invention.

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

The claim states that the composition has “a repose angle of 60 degrees or smaller.” This is supported in the specification in paragraph 3, which states that the “composition has excellent fluidity when the repose angle is 60 degrees or smaller...” The description also

includes examples which suggest repose angles of 43 degrees, 48 degrees, and 55 degrees. Although no specific examples are directed to repose angles below 43 degrees, the statements in the specification are adequate to sufficiently describe the claimed invention.

3. In Question 1 stated above, if you chose "No" (the claimed invention does not meet the support requirements) or "Can be true for both Yes and No," please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

N/A

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

N/A

2. Case 2

(1) Hypothetical Case

Case 2

[Claims]

1. A composition comprising ingredient (A) and ingredient (B), wherein the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%,

Formula (I) $R = (d_s - d_o) / d_o \times 100 (\%)$

where “ d_s ” is a diameter of a workpiece flowing out from an extrusion tool, and “ d_o ” is a diameter of an extrusion tool.

[Description]

It is essential that the ingredient (A) of the present invention exhibits a specific property when formed being fluidized, i.e., has a ratio (R) which is an index of the specific property thereof lying in particular ranges. The ratio can be adjusted to some degree by adjusting, for example, the manufacturing conditions such as the composition, temperature, pressure, concentration of the polymerization initiator and solvent.

In the present invention, it is desired that the ingredient (A) exhibit particular properties and, further, exhibit the ratio R in a range of 40 to 65%.

Therefore, the composition of the invention obtained by blending the ingredient (A) with ingredient (B) exhibits all of excellent properties of the conventional composition of this kind, contributes to attain high-speed workability.

[Examples]

Example 1

A composition obtained by melting and kneading A1 (density: 0.90 g/cm³, R: 54%) as the ingredient (A) and B1 as the ingredient (B) in advance was extruded at a prescribed temperature to observe the appearance of a workpiece and the formability was evaluated.

(Other than Example 1, the only example disclosed is one using ethylene, methacrylic acid, isobutyl acrylate copolymer resin of R: 54%.)

Issues to be Considered

In the patent claim, a specific parameter range is written. In the description, however, there is a mention stating that, by adjusting various manufacturing conditions (in this case, these conditions include composition, temperature, pressure, concentration of the polymerization initiator, and solvent), the parameter values can be adjusted, although no specific manufacturing conditions for ingredient (A) are written. However, among the parameter ranges given in the Example, only one example using a composition having one value of parameter has actually been disclosed.

Should the claimed invention be determined to be described in the description? Or, based on the reason that only one parameter range is disclosed from among the parameter ranges for ingredient (A) in the example, should it be determined not to be described in the description?

When determining that, are any conditions required?

2. Case 2

(2) Case Study by IP5 Offices

Case Study 2 on Hypothetical Case

Name of Office:EPO

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

According to Guidelines F-IV, 6.4, “An objection under both Art. 84 and Art. 83 may also be justified. An example would be a claim relating to a known class of chemical compounds defined by measurable parameters, when the description does not disclose a technical teaching allowing the skilled person to manufacture those compounds complying with the parametric definition, and this is not otherwise feasible by the application of common general knowledge or routine experimentation. Such a claim would be both technically not supported and not sufficiently disclosed”

This seems to apply to the present case. Here, although there are 1 or 2 examples, there is no indication on how manufacturing conditions of ingredient A influence parameter R at all, apart from a statement that they do, and thus they seem not inherent to the type of ingredient A. The examples are not supplying this information either. and there is also no general teaching on this in the description. So if it is not part of common general knowledge how to do impart parameter R onto an ingredient A, a skilled person would have to perform a research program to find this out, which is undue burden. So the claim seems to lack support (Art. 84 EPC) and the invention seems to lack disclosure (Art. 83 EPC).

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

Information on what factors influence R and how, if this is not known from common general knowledge. Ideally the examples also should mention how A was obtained, so that the factors from the general description would be supported by values in an example that

could serve as basis for the skilled person to apply the teaching.
If the applicant could provide evidence that this is common general knowledge, this objection could also be withdrawn.

Case Study 2 on Hypothetical Case

Name of Office: JPO

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

The problem to be solved by the claimed invention is recognized as providing a composition that contributes to attaining high-speed workability, in addition to exhibiting all of the excellent properties of the conventional compositions of this kind.

With regard to a ratio (R) of the ingredient (A), the description states that “[i]t is essential that the ingredient (A) of the present invention exhibits a specific property when formed being fluidized, i.e., has a ratio (R) which is an index of the specific property thereof lying in particular ranges. The ratio can be adjusted to some degree by adjusting, for example, the manufacturing conditions such as the composition, temperature, pressure, concentration of the polymerization initiator and solvent”; and “[i]n the present invention, it is desired that the ingredient (A) exhibit[s] particular properties and, further, exhibit[s] the ratio (R) in a range of 40 to 65%.”

If a person skilled in the art, based on the common general knowledge, would recognize that the ratio (R) of the ingredient (A) is closely related to the high-speed workability and that, when R falls within the range of 40 to 65%, such workability becomes excellent, the JPO’s examiner determines that the claimed invention meets the support requirement. That is because the invention does not go beyond the “extent of disclosure in the description to which a person skilled in the art would recognize that the problems to be solved by the invention would be actually solved.”

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

Bases for the JPO’s determination include: statements in the description being indicated in (1) above; and the common general knowledge, based on which a person skilled in the art would recognize that the ratio (R) of the ingredient (A) is closely related to the high-speed workability, and that this workability becomes excellent when R falls within the range of 40 to 65%.

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

With regard to the ratio (R), the description only indicates that “[i]n the present invention, it is desired that the ingredient (A) exhibit[s] particular properties and, further, exhibit[s] the ratio (R) in a range of 40 to 65%.” Also, among the Examples, only compositions comprising ingredient (A) that has a ratio (R) of 54% are disclosed.

When a person skilled in the art, even though taking into account the common general knowledge, cannot understand that the ratio (R) relates to the high-speed workability of the composition, as well as that the entire composition comprising the ingredient (A), the ratio (R) of which is in the range of 40 to 65%, would solve the problem as is the case with the compositions shown in the Examples, the claimed invention goes beyond the “extent of the disclosure in the description to which a person skilled in the art would recognize that the problem to be solved by the invention would be actually solved.” In such a case, it cannot be said that the claimed invention substantially corresponds to an invention stated in the description, and thus, JPO’s examiner determines that the claimed invention does not meet the support requirement.

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

The common general knowledge being indicated in 2 above is needed.

Case Study 2 on Hypothetical Case

Name of Office: **KIPO**

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

Patent Act Article 42(4)(1) stipulates “The claims shall be supported by the description.” and the Patent Examination Guidelines Chapter 2 Section 4.3 states “Whether a claimed invention is supported by the description shall be determined based on a view of a person skilled in the art on whether the matters corresponding to claimed invention are stated in the description. Whether the corresponding matters are stated in the description shall be determined by thoroughly reviewing whether an invention, which is beyond the scope for a person skilled in the art to understand through the description, is claimed, considering the purport of Article 42(4)(1) of the Patent Act rather than literal identicalness between the claim and the description.” .

In this case, the description explicitly states that the ratio R could be in a range of 40 to 65% and provides a working example. Therefore, it is obvious to a person skilled in the art that features written in the claim with the numerical ranges are supported by the statements of the description.

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

The description explicitly states that the ratio R could be adjusted to some degree and could be in a range of 40 to 65%. Furthermore, a working example within the numerical range is indicated. Therefore, the claim shall be deemed to meet the support requirements. Generally, indicating only one working example within claimed numerical range is not deemed as a violation of the support requirements in KIPO. Even if there is no working example, the support requirements can be met if a person skilled in the art could recognize the description having corresponding features of the claimed invention.

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

Case Study 2 on Hypothetical Case

Name of Office: SIPO

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

[Guidelines for Patent Examination Part II, Chapter 2, Section 3.2.1](#) for “Support in the Description” stipulate that “When determining whether a claim is supported by the description, the examiner shall take into account the whole contents of the description, rather than merely the contents in the part of specific mode for carrying out the invention. If other parts of the description also include contents concerning embodiments or examples, and it can be established the generalization of the claim is appropriate viewed from the whole contents of the description, then the claim shall be considered to have support in the description”. Therefore “the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%” defined in claim 1 is determined to meet the requirement of “Support in the Description” according to the guidelines stated above.

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

In regard to “the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%” written in the claim, the examples disclose only one example using a composition having one R value of 54%. Nevertheless in other parts of the description, it describes that “In the present invention, it is desired that the ingredient (A) exhibit particular properties and, further, exhibit the ratio R in a range of 40 to 65%. Therefore, the composition of the invention obtained by blending the ingredient (A) with ingredient (B) exhibits all of excellent properties of the conventional composition of this kind, contributes to attain high-speed workability”. Although no specific manufacturing conditions for ingredient (A) are written, it is not very substantial for the present invention because ingredient (A) is just a material for the composition and it would be acceptable provided that the person skilled in the art can obtain it. According to the description, it is known that “the ingredient (A) of the present invention exhibits a specific property when formed being fluidized, i.e., has a ratio (R) which is an index of the specific property thereof lying in particular ranges. The ratio can be adjusted to some degree by adjusting, for example, the manufacturing conditions such as the composition, temperature, pressure, concentration of the polymerization initiator and solvent”, which is also known in the prior art. The person skilled in the art can obtain such kinds of ingredient (A) with parameter R in the range of 40-65% by adjusting various manufacturing conditions such as composition, temperature, pressure, concentration of the polymerization initiator, and solvent when needed. Therefore “the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%” written in the claim can be supported by the description.

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

Guidelines for Patent Examination Part II, Chapter 2, Section 2.2.6 for “Specific Mode for Carrying Out the Invention or Utility Model” stipulate that “Where the improvement of a claim compared to the background art involves a numerical range, the description shall usually give examples for the values near the both ends (preferably the both end values), and, where the range is broad, at least one example for an intermediate value”. Only one example with R of 54% can not support the whole range of 40 to 65% since it is unpredictable when R is not 54%. Therefore “the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%” written in the claim can not be supported by the description.

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

Supposed that the contribution of the invention is to choose ingredient (A) with a ratio (R) defined by the following formula (I) in a range of 40 to 65% which renders the composition very good properties that can not be predictable by a person skilled in the art, only one example with R of 54% can not support the whole range of 40 to 65% since it is unpredictable when R is not 54%. In that case, “the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%” written in the claim can not be supported by the description according to Guidelines for Patent Examination Part II, Chapter 2, Section 2.2.6 for “Specific Mode for Carrying Out the Invention or Utility Model” because it stipulates that “Where the improvement of a claim compared to the background art involves a numerical range, the description shall usually give examples for the values near the both ends (preferably the both end values), and, where the range is broad, at least one example for an intermediate value”.

Case Study 2 on Hypothetical Case

Name of Office: USPTO

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

35 U.S.C. 112(a) provides that the “specification shall contain a written description of the invention...” The Manual of Patent Examining Procedure (MPEP) §2163 provides that in order “to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed”. It is well accepted that a satisfactory description may be in the claims or any other portion of the originally filed specification. Further an applicant can show possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention. Possession may be shown in a variety of ways including description of an actual reduction to practice, or by showing that the invention was “ready for patenting” such as by the disclosure of drawings or structural chemical formulas that show that the invention was complete, or by describing distinguishing identifying characteristics sufficient to show that the applicant was in possession of the claimed invention. At the USPTO, there is a presumption that an adequate written description of the claimed invention is present when the application is filed, and therefore, the Office has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize the written description of the invention as providing adequate support for the claimed invention.. MPEP §2163.

In this situation, a person having ordinary skill in the art could reasonably conclude that the inventor had possession of the invention of a composition which includes an ingredient (A) having a ratio defined by a specific formula in a range of 40 to 65%. This is supported in the specification in paragraph 2, which states that...”it is desired that ingredient (A) exhibit particular properties and, further, exhibit the ratio R in the range of 40-65%.” The description also includes a working example where $R = 54\%$.

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

The claim states “A composition comprising ingredient (A)...wherein the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%...” This language is supported in paragraph 2 of the description which states that...”it is desired that ingredient

(A) exhibit particular properties and, further, exhibit the ratio R in the range of 40-65%.” The description also includes a working example where $R = 54\%$. The statements in the specification are adequate to sufficiently describe the claimed invention.

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

N/A

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

N/A

3. Case 3

(1) Hypothetical Case

Case 3

[Claims]

1. A cosmetic comprising the ingredients (A), (B), (C), and an oily gelling agent.
2. The cosmetic according to claim 1, wherein the oily gelling agent is produced from ingredients (E), (F), (G).

[Description]

Next, the oily gelling agent will be described. Any oily gelling agent which can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C can be used. By blending the oily gelling agent to a cosmetic, the cosmetic can obtain a film-forming ability.

Examples of such oily gelling agents include D1 (produced from ingredient (E), ingredient (F), ingredient (G)), D2, D3, D4, D5, D6, D7. The oily gelling agents may be used alone or in a combination of two or more thereof.

For example, when the oily gelling agent is a composition produced from ingredient (E), ingredient (F), and ingredient (G), the composition can be produced as an esterified product of these materials.

[Examples]

The Examples show only the oily gelling agent that is a composition produced from ingredients (E), (F), and (G).

Issues to be Considered

In Claim 1, the “oily gelling agent” is not specifically identified. Although in the description, a large number of examples for oily gelling agents are listed, the Examples disclose only the oily gelling agent (D1), a composition produced from ingredients (E), (F), and (G).

Should the invention indicated in Claim 1 be determined to be described in the description? Or, based on the reason that other types of the oily gelling agents are not disclosed, except for D1 that is described in the Example, should it be determined not to be described in the description?

When determining that, are any conditions required?

3. Case 3

(2) Case Study by IP5 Offices

Case Study 3 on Hypothetical Case

Name of Office: EPO

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

Guidelines F-IV, 6.2 state that “The applicant should be allowed to cover all obvious modifications of, equivalents to and uses of that which he has described. In particular, if it is reasonable to predict that all the variants covered by the claims have the properties or uses the applicant ascribes to them in the description, he should be allowed to draw his claims accordingly.”

Guidelines F-IV, 6.3 state “The examiner should raise an objection of lack of support only if he has well-founded reasons. [...] Where an objection is raised, the reasons should, where possible, be supported specifically by a published document. A claim in generic form, i.e. relating to a whole class, e.g. of materials or machines, may be acceptable even if of broad scope, if there is fair support in the description and there is no reason to suppose that the invention cannot be worked through the whole of the field claimed.”

In the present case, the description mentions that “by blending the oily gelling agent to a cosmetic, the cosmetic can obtain a film-forming ability” (i.e. the technical effect). In the absence of evidence that there are oily gelling agents which do not achieve this film-forming, an objection of lack of support should not be raised.

On the other hand, claim 1 leads to a lack of clarity.

The term “oily gelling agent” appears not to form part of the common general knowledge. When performing the search, this term will be broadly interpreted, which may result in a lack of novelty (Guidelines F-IV, 4.23). The gelling agents D1-D7 mentioned in the description will all be searched (Guidelines B-III, 3.2.3), as well as the broad term used in claim 1. In order to overcome the objection of lack of clarity, the applicant will be asked to incorporate the specific oily gelling agents D1-D7 in claim 1.

Concerning claim 2, the oily gelling agent is formulated in terms of a product-by-process (Guidelines F-IV, 4.12). It is not clear whether “D1”, as mentioned in the description defines the same product in terms of structural features. If this is the case, then rather the structural definition should be included in claim 2 (because a definition of a product in terms of a process is to be construed as the product as such).

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

There is one example given of a gelling agent, namely the agent produced from (E), (F) and (G). From the section “issues to be considered”, it appears that the example also discloses the suitability of this gelling agent for achieving the technical effect (namely the film-forming ability of the cosmetic) [this is the “support of technical character” as stated in GL, F-IV, 6.3].

Other gelling agents are listed in the description. From the section “issues to be considered”, it appears that a large number of examples for oily gelling agents are listed. It is assumed that the agents D2-D7 are well-known compounds. There appears to be no information, neither in the application as filed, nor in the prior art, that there would be oily gelling agents that do not achieve the disclosed effect. The applicant should therefore be allowed to cover these obvious modifications (GL, F-IV, 6.2).

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

Case Study 3 on Hypothetical Case

Name of Office: JPO

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

• Claim 1

Based on the statements in the description, a problem to be solved by the invention is recognized as providing a cosmetic that has a film-forming ability.

It is the common general knowledge that an “oily gelling agent,” which is recited in Claim 1, is dissolved in oil, and by blending it to a cosmetic, the cosmetic obtains a film-forming ability.

With regard to the oily gelling agent, the description states that “[a]ny oily gelling agent, which can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C can be used. By blending the oily gelling agent to a cosmetic, the cosmetic can obtain a film-forming ability.” In light of the common general knowledge stated above, this statement is appropriate.

Additionally, specific examples comprising the oily gelling agent D1 are shown in the description.

Accordingly, based on the statements in the description and the common general knowledge, a person skilled in the art would understand that, by blending an oily gelling agent which “can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C,” to a cosmetic comprising the ingredients (A), (B), and (C), the cosmetic would obtain a film-forming ability.

Based on the above, the JPO determines that the invention meets the support requirement because, in the description, the claimed invention does not go beyond the “extent of disclosure in the description to which a person skilled in the art would recognize that the problem to be solved by the invention would be actually solved.”

• Claim 2

Based on a specific example that explicitly states the invention claimed in Claim 2 and other statements in the description as well as the common general knowledge, the invention does not go beyond the “extent of disclosure in the description to which a person skilled in the art would recognize that the problem to be solved by the invention would be actually solved.” Therefore, the invention meets the support requirement.

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

The following general technical knowledge is needed: cosmetics comprising the ingredients (A), (B), and (C) obtain a film-forming ability by blending an oily gelling agent which "can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C" to the cosmetics.

3. In Question 1 stated above, if you chose "No" (the claimed invention does not meet the support requirements) or "Can be true for both Yes and No," please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

Case Study 3 on Hypothetical Case

Name of Office: **KIPO**

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

Patent Act Article 42(4)(1) stipulates “The claims shall be supported by the description.” and the Patent Examination Guidelines Chapter 2 Section 4.3 states “Whether a claimed invention is supported by the description shall be determined based on a view of a person skilled in the art on whether the matters corresponding to claimed invention are stated in the description. Whether the corresponding matters are stated in the description shall be determined by thoroughly reviewing whether an invention, which is beyond the scope for a person skilled in the art to understand through the description, is claimed, considering the purport of Article 42(4)(1) of the Patent Act rather than literal identicalness between the claim and the description.” .

In this case, the description explicitly states the oily gelling agent and provides examples thereof. Therefore, it is obvious to a person skilled in the art that features written in the claim are supported by the statements of the description.

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

The description explicitly states the oily gelling agent and lists examples thereof such as D1 (produced from ingredient E, F, G), D2, D3, D4, D5, D6 and D7.

Although only one working example is given, the statements of the description and the working example are sufficient to meet the support requirements for the claim 1 and the claim 2.

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

Case Study 3 on Hypothetical Case

Name of Office: SIPO

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

Guidelines for Patent Examination Part II, Chapter 2, Section 3.2.1 for “Support in the Description” stipulate that “If the person skilled in the art can reasonably predict that all the equivalents or obvious variants of the embodiments set forth in the description have the same properties or uses, then the applicant shall be allowed to generalize the protection extent of the claim to cover all the equivalents or obvious variants” , and “As for a broadly generalized claim relating to the whole class of products or machines, if it is fairly supported by the description, and there is no reason to suppose that the invention cannot be worked through the whole of the field claimed, then the claim may be acceptable even if its extent of protection is broad.”. Therefore “oily gelling agent” defined in claim 1 is determined to meet the requirement of “Support in the Description” according to the guidelines stated above.

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

In regard to “oily gelling agent” written in the claim, the examples show only the oily gelling agent that is a composition produced from ingredients (E), (F), and (G). Nevertheless in other parts of the description, it describes that “Any oily gelling agent which can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C can be used. By blending the oily gelling agent to a cosmetic, the cosmetic can obtain a film-forming ability”, and “Examples of such oily gelling agents include D1 (produced from ingredient (E), ingredient (F), ingredient (G)), D2, D3, D4, D5, D6, D7. The oily gelling agents may be used alone or in a combination of two or more thereof”. The person skilled in the art can reasonably predict that all the equivalents or obvious variants of the oily gelling agents set forth in the description have the same properties and can be used in the cosmetic to render the cosmetic film-forming ability. Therefore “oily gelling agent” written in the claim can be supported by the description.

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

Case Study 3 on Hypothetical Case

Name of Office: USPTO

1. Does the invention written in the claim meet the support requirements?

- Yes
- No
- Can be true for both Yes and No

2. In Question 1 stated above, if you chose “Yes” (the claimed invention meets the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is judged to meet the support requirements

35 U.S.C. 112(a) provides that the “specification shall contain a written description of the invention...” The Manual of Patent Examining Procedure (MPEP) §2163 provides that in order “to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed”.. It is well accepted that a satisfactory description may be in the claims or any other portion of the originally filed specification. Further an applicant can show possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention. Possession may be shown in a variety of ways including description of an actual reduction to practice, or by showing that the invention was “ready for patenting” such as by the disclosure of drawings or structural chemical formulas that show that the invention was complete, or by describing distinguishing identifying characteristics sufficient to show that the applicant was in possession of the claimed invention. At the USPTO, there is a presumption that an adequate written description of the claimed invention is present when the application is filed, and therefore, the Office has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize the written description of the invention as providing adequate support for the claimed invention.. MPEP §2163.

In this situation, a person having ordinary skill in the art could reasonably conclude that the inventor had possession of the invention of a composition. Paragraph 1 of the description states that any oily gelling agent which can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C can be used. Paragraphs 2 and 3 then further describe examples of oily gelling agents.

(2) Descriptions of specifications or claims as well as required common general technical knowledge, which serve as a basis for determining that the invention meets the support requirements

In the present example, the claim language “oily gelling agent” is in question. Paragraph 1 of the description states that any oily gelling agent which can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C can be used. Paragraphs 2 and 3 then further describe examples of oily gelling

agents. The statements in the specification are adequate to sufficiently describe the claimed invention. Examples of such oily gelling agents include **D1 (produced from ingredient (E), ingredient (F), ingredient (G))**, D2, D3, D4, D5, D6, D7. The oily gelling agents may be **used alone or in a combination of two or more thereof**.

3. In Question 1 stated above, if you chose “No” (the claimed invention does not meet the support requirements) or “Can be true for both Yes and No,” please fill in the following details:

(1) Reasons why the invention is not judged to meet the support requirements

N/A

(2) Desirable descriptions of specifications or claims as well as required common general technical knowledge in the initial application, which serve as a basis for not determining that the invention indicates a violation of requirements

N/A

4. Outline of IP5 Offices' Case Studies (Cases 1-3)

Case 1

	EPO	KIPO	JPO
1.	Yes	Yes	Yes
Laws or Examination Guidelines	<ul style="list-style-type: none"> ● Guidelines F-IV, 6.3 	<ul style="list-style-type: none"> ● Patent Act Article 42(4)(1) ● Guidelines Chapter 2 Section 4.3 	<ul style="list-style-type: none"> ● Patent Act Article 36(6)(1) ● Guidelines, Part II, Chapter 2, "Section 2 Support Requirement"
Contents of the Laws or Examination Guidelines	<ul style="list-style-type: none"> ● Guidelines F-IV, 6.3 <p>"generally, a claim should be regarded as supported by the description unless there are well-founded reasons for believing that the skilled person would be unable,...to extend the particular teaching of the description to the whole of the field claimed ..."</p> <p>"The examiner should raise an objection of <u>lack of support only if he has well-founded reasons....</u>"</p>	<ul style="list-style-type: none"> ● Patent Act Article 42(4)(1) <p>"The claims shall be supported by the description."</p> <ul style="list-style-type: none"> ● Guidelines Chapter 2 Section 4.3 <p>"Whether a claimed invention is supported by the description shall be determined based on a view of a person skilled in the art on whether the matters corresponding to claimed invention are stated in the description. Whether the corresponding matters are stated in the description shall be determined by thoroughly reviewing whether an invention, <u>which is beyond the scope for a person skilled in the art to understand through the description, is claimed.</u>" ...</p>	<ul style="list-style-type: none"> ● Patent Act Article 36(6)(1) <p>"claimed inventions shall not go beyond the scope of disclosure in the description."</p> <ul style="list-style-type: none"> ● Guidelines, Part II, Chapter 2, "Section 2 Support Requirement" <p>When it is determined that the <u>claimed invention goes beyond the "extent of disclosure in the description to which a person skilled in the art would recognize that the problem to be solved by the invention would be actually solved"</u>, it cannot be said that the claimed invention substantially corresponds to an invention that is stated in the description.</p>
2.(1)	<p>The <u>repose angle parameter</u> appears to be largely the result of the composition and <u>L/D ratio... which the skilled person can influence</u> and which are <u>already to some extent defined in the claim</u>. In this case, in addition, there is no document showing that the skilled person would be unable to extend the teaching. So presently, it seems <u>difficult to supply well-founded reasons for an objection of lack of support ...</u></p>	<p>In this case, <u>the description explicitly states the claimed numerical ranges of average L/D, bulk density and repose angle and provides several working examples</u>. Therefore, it is obvious to a person skilled in the art that features written in the claim with the numerical ranges are supported by the statements of the description</p>	<p>In Claim 1, three parameters ("<u>average L/D</u>", "<u>bulk density</u>", and "<u>repose angle</u>") are recited to define the claimed composition, and only <u>their upper limits are identified</u> as being in the form of "xx or lower/smaller".</p> <p>With regard to the "average L/D,"... it is obvious for a person skilled in the art that a lower average L/D leads to more excellent fluidity. Those statements in the descriptions are supported by Examples 1-3....</p> <p>"<u>repose angle</u>" is also stated in the description. In light of the common general knowledge, it is obvious for a person skilled in the art that a smaller repose angle leads to more excellent fluidity and uniform dispersibility. Also, those statements are supported by Examples 1-3....</p> <p>A "<u>bulk density</u>" is also stated in the description. In light of the common general knowledge, a person skilled in the art would recognize based on those statements that, when the average L/D and the repose angle are within the ranges recited in Claim 1, the powder fluidity would be achieved enough to solve the technical problem, even though the bulk density is lower than the lower limit mentioned as a preferable one in the description....</p>
2.(2)	<p>It is possible that if L/D is closer to 1 than currently exemplified, also the repose angle will still considerable decrease with respect to what is exemplified. So there is <u>some indication on what the skilled person can do to further decrease the repose angle with respect to the examples</u>. The nature of A, B, C and D may also affect the fluidity in a manner which could in principle be known or predictable to the skilled person....</p>	<p>The description explicitly states the elements with the numerical ranges: <u>average L/D of 3.0 or lower, bulk density of 0.80 g/mL or lower and repose angle of 60 degree or smaller</u>. Furthermore, several working examples within the numerical ranges are indicated. <u>Although there are no working examples disclosing a range of less than 43 degrees, the statements in the description and indicated working examples are sufficient to meet the support requirements.</u></p>	<p><u>average L/D</u> The description states that "... average L/D of 3.0 or lower ..." "[a] lower average L/D is more preferable because the fluidity of a composition is improved. Therefore, the lower limit thereof is not particularly limited..."</p> <p><u>Repose angle</u> "... The repose angle is preferably 45 degree or smaller. The above-described effects are increased with a smaller repose angle. Therefore, the lower limit thereof is not particularly limited."</p> <p><u>Bulk density</u> "... The bulk density is preferably 0.45 g/mL or lower." This means that, by lowering a bulk density, not only the</p>

			powder fluidity but also the compression moldability become favorable. In addition, based on the common general knowledge, a person skilled in the art needs to recognize that, even if the bulk density is lower than 0.05g/mL, the problem would be solved.
3.(1)	N/A	N/A	N/A
3.(2)	N/A	N/A	N/A

	SIPO	USPTO
1.	Yes	Yes
Laws or Examination Guidelines	● Guidelines Part II, Chapter 2, Section 3.2.1 for "Support in the Description"	● 35 U.S.C. 112(a) ● MPEP §2163
Contents of the Laws or Examination Guidelines	● Guidelines "Support in the Description" "When determining whether a claim is supported by the description, <u>the examiner shall take into account the whole contents of the description</u> , rather than merely the contents in the part of specific mode for carrying out the invention. If other parts of the description also include contents concerning embodiments or examples, and <u>it can be established the generalization of the claim is appropriate viewed from the whole contents of the description</u> , then the claim shall be considered to have support in the description".	● 35 U.S.C. 112(a) "specification shall contain a written description of the invention..." ● MPEP §2163 In order to satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that <u>the inventor had possession of the claimed invention as of the filing date sought</u> At the USPTO, <u>there is a presumption that an adequate written description of the claimed invention is present when the application is filed, and therefore, the Office has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize the written description of the invention as providing adequate support for the claimed invention</u> .
2.(1)	"a repose angle of 60 degree or smaller" defined in claim 1 is determined to meet the requirement of "Support in the Description" according to the guidelines stated above.	... a person having ordinary skill in the art could reasonably conclude that the inventor had possession of the invention of a composition which is a powder having a <u>repose angle of 60 degrees or smaller</u> . This is supported in the specification in paragraph 3, which states that "the composition has excellent fluidity when the repose angle is 60 degrees or smaller..." This language demonstrates identifying characteristics sufficient to show that the applicant was in possession of the claimed invention.
2.(2)	In regard to "a repose angle of 60 degree or smaller" written in the claim, the examples disclose only the composition having a repose angle from 43 to 60 degrees. ... <u>It clearly gives the information that the smaller of the repose angle the better</u> . In addition, it is recognized to be <u>common general technical knowledge that the smaller the repose angel is, the more excellent fluidity the composition would have</u> . <u>Although there is no example for composition having a repose angle of less than 43 degrees, it is easy for a person skilled in the art to determine or evaluate the effect beforehand</u>	The claim states that the composition has "a repose angle of 60 degrees or smaller." This is supported in the specification in paragraph 3, which states that the "composition has excellent fluidity when the repose angle is 60 degrees or smaller..." The description also includes examples which suggest repose angles of 43 degrees, 48 degrees, and 55 degrees. <u>Although no specific examples are directed to repose angles below 43 degrees, the statements in the specification are adequate to sufficiently describe the claimed invention</u> .
3.(1)	N/A	N/A
3.(2)	N/A	N/A

Case 2

	EPO	KIPO	JPO
1.	No	Yes	Can be true for both Yes and No
Laws or Examination Guidelines	● Guidelines F-IV, 6.4	● Patent Act Article 42(4)(1) ● Guidelines Chapter 2 Section 4.3	● Patent Act Article 36(6)(1) ● Guidelines, Part II, Chapter 2, "Section 2 Support Requirement"
Contents of the Laws or Examination Guidelines	● Guidelines F-IV, 6.4 "... An example would be a claim relating to a known class of <u>chemical compounds defined by measurable parameters, when the description does not disclose a technical teaching allowing the skilled person to manufacture those compounds complying with the parametric definition, and this is not otherwise feasible by the application of common general knowledge or routine experimentation. Such a claim would be both technically not supported and not sufficiently disclosed</u> "	● Patent Act Article 42(4)(1) "The claims shall be supported by the description." ● Guidelines Chapter 2 Section 4.3 "Whether a claimed invention is supported by the description shall be determined based on a view of a person skilled in the art on whether the matters corresponding to claimed invention are stated in the description. Whether the corresponding matters are stated in the description shall be determined by thoroughly reviewing whether an invention, <u>which is beyond the scope for a person skilled in the art to understand through the description, is claimed,</u> " ...	● Patent Act Article 36(6)(1) "claimed inventions shall not go beyond the scope of disclosure in the description." ● Guidelines, Part II, Chapter 2, "Section 2 Support Requirement" When it is determined that the <u>claimed invention goes beyond the "extent of disclosure in the description to which a person skilled in the art would recognize that the problem to be solved by the invention would be actually solved"</u> , it cannot be said that the claimed invention substantially corresponds to an invention that is stated in the description.
2.(1)	N/A	In this case, <u>the description explicitly states that the ratio R could be in a range of 40 to 65% and provides a working example.</u> Therefore, it is obvious to a person skilled in the art that features written in the claim with the numerical ranges are supported by the statements of the description.	<u>The problem to be solved by the claimed invention is recognized as providing a composition that contributes to attaining high-speed workability, in addition to exhibiting all of the excellent properties of the conventional compositions of this kind.</u> With regard to a ratio (R) of the ingredient (A), the statements in the description being indicated in (2) below. <u>If a person skilled in the art, based on the common general knowledge, would recognize that the ratio (R) of the ingredient (A) is closely related to the high-speed workability and that, when R falls within the range of 40 to 65%, such workability becomes excellent, the JPO's examiner determines that the claimed invention meets the support requirement....</u>
2.(2)	N/A	The description explicitly states that <u>the ratio R could be adjusted to some degree and could be in a range of 40 to 65%. Furthermore, a working example within the numerical range is indicated.</u> Therefore, the claim shall be deemed to meet the support requirements.	Bases for the JPO's determination include: the statement in the description; "[i]t is essential that the ingredient (A) of the present invention exhibits a specific property when formed being fluidized, i.e., has a ratio (R) which is an index of the specific property thereof lying in particular ranges. The ratio can be adjusted to some degree by adjusting, for example, the manufacturing conditions such as the composition, temperature, pressure, concentration of the polymerization initiator and solvent"; and "[i]n the present invention, it is desired that the ingredient (A) exhibit[s] particular properties and, further, exhibit[s] the ratio (R) in a range of 40 to 65%."; and <u>the common general knowledge, based on which a person skilled in the art would recognize that the ratio (R) of the ingredient (A) is closely related to the high-speed workability, and that this workability becomes excellent when R falls within the range of 40 to 65%.</u>
3.(1)	<u>... although there are 1 or 2 examples, there is no indication on how manufacturing conditions of ingredient A influence parameter R at all, ...</u>	N/A	With regard to the ratio (R), the description only indicates that "[i]n the present invention, it is desired that the ingredient (A) exhibit[s] particular properties and, further, exhibit[s] the

	and thus they seem not inherent to the type of ingredient A. ... there is also no general teaching on this in the description. ... So the claim seems to lack support and the invention seems to lack disclosure.		ratio (R) in a range of 40 to 65%.” Also, among the Examples, <u>only compositions comprising ingredient (A) that has a ratio (R) of 54% are disclosed.</u> When a person skilled in the art, even though taking into account the common general knowledge, <u>cannot understand that the ratio (R) relates to the high-speed workability of the composition, as well as that the entire composition comprising the ingredient (A), the ratio (R) of which is in the range of 40 to 65%, would solve the problem</u> as is the case with the compositions shown in the Examples, ... the claimed invention does not meet the support requirement.
3.(2)	<u>Information on what factors influence R and how, if this is not known from common general knowledge. Ideally the examples also should mention how A was obtained,</u> If the applicant could provide evidence that this is common general knowledge, this objection could also be withdrawn.	N/A	<u>If a person skilled in the art, based on the common general knowledge, would recognize that the ratio (R) of the ingredient (A) is closely related to the high-speed workability and that, when R falls within the range of 40 to 65%, such workability becomes excellent, the JPO’s examiner determines that the claimed invention meets the support requirement. That is because the invention does not go beyond the “extent of disclosure in the description to which a person skilled in the art would recognize that the problems to be solved by the invention would be actually solved.”</u>

	SIPO	USPTO
1.	Can be true for both Yes and No	Yes
Laws or Examination Guidelines	<ul style="list-style-type: none"> ● Guidelines Part II, Chapter 2, Section 3.2.1 for “Support in the Description” ● Guidelines Part II, Chapter 2, Section 2.2.6 for “Specific Mode for Carrying Out the Invention or Utility Model” 	<ul style="list-style-type: none"> ● 35 U.S.C. 112(a) ● The Manual of Patent Examining Procedure (MPEP) §2163
Contents of the Laws or Examination Guidelines	<ul style="list-style-type: none"> ● Guidelines “Support in the Description” “When determining whether a claim is supported by the description, <u>the examiner shall take into account the whole contents of the description</u>, rather than merely the contents in the part of specific mode for carrying out the invention. If other parts of the description also include contents concerning embodiments or examples, <u>it can be established the generalization of the claim is appropriate viewed from the whole contents of the description</u>, then the claim shall be considered to have support in the description”. ● Guidelines “Specific Mode for Carrying Out the Invention or Utility Model” “Where the <u>improvement of a claim compared to the background art involves a numerical range</u>, the <u>description shall usually give examples for the values near the both ends</u> (preferably the both end values), and, where <u>the range is broad, at least one example for an intermediate value</u>”. 	<ul style="list-style-type: none"> ● 35 U.S.C. 112(a) “specification shall contain a written description of the invention...” ● MPEP §2163 In order to satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that <u>the inventor had possession of the claimed invention as of the filing date sought. ... At the USPTO, there is a presumption that an adequate written description of the claimed invention is present when the application is filed, and therefore, the Office has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize the written description of the invention as providing adequate support for the claimed invention .</u>
2.(1)	“the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%” defined in claim 1 is determined to meet the requirement of “Support in the Description” according to the guidelines stated above.	In this situation, a person having ordinary skill in the art could reasonably conclude that the inventor had possession of the invention of a composition which includes an ingredient (A) having a ratio defined by a specific formula in a range of 40 to 65%. This is supported in the specification in paragraph 2, which states that...“it is desired that ingredient (A) exhibit particular properties and, further, exhibit the ratio R in the range of 40-65%.” The description also includes a working example where R = 54%.
2.(2)	In regard to “the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%” written in the claim, the examples disclose only one example using a composition having one R value of 54%. ... Although no specific manufacturing conditions	The claim states “A composition comprising ingredient (A)...wherein the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%...” This language is supported in paragraph 2 of the description which states that...“it is desired that ingredient (A) exhibit

	<p><u>for ingredient (A) are written, it is not very substantial for the present invention because ingredient (A) is just a material for the composition and it would be acceptable provided that the person skilled in the art can obtain it...</u> "the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%" written in the claim can be supported by the description.</p>	<p>particular properties and, further, exhibit the ratio R in the range of 40-65%." The description also includes a working example where R = 54%. The statements in the specification are adequate to sufficiently describe the claimed invention.</p>
3.(1)	<p><u>Only one example with R of 54% can not support the whole range of 40 to 65% since it is unpredictable when R is not 54%.</u> Therefore "the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%" written in the claim can not be supported by the description.</p>	N/A
3.(2)	<p><u>Supposed that the contribution of the invention is to choose ingredient (A) with a ratio (R) defined by the following formula (I) in a range of 40 to 65% which renders the composition very good properties that can not be predictable by a person skilled in the art,</u> only one example with R of 54% can not support the whole range of 40 to 65% since it is unpredictable when R is not 54%. ...</p>	N/A

Case 3

	EPO	KIPO	JPO
1.	Yes	Yes	Yes
Laws or Examination Guidelines	<ul style="list-style-type: none"> ● Guidelines F-IV, 6.2 ● Guidelines F-IV, 6.3 	<ul style="list-style-type: none"> ● Patent Act Article 42(4)(1) ● Guidelines Chapter 2 Section 4.3 	<ul style="list-style-type: none"> ● Patent Act Article 36(6)(1) ● Guidelines, Part II, Chapter 2, "Section 2 Support Requirement"
Contents of the Laws or Examination Guidelines	<ul style="list-style-type: none"> ● Guidelines F-IV, 6.2 <p>"The applicant should be allowed to cover all obvious modifications of equivalents to and uses of that which he has described. ..."</p> <ul style="list-style-type: none"> ● Guidelines F-IV, 6.3 <p>"The examiner should raise an objection of lack of support only if he has well-founded reasons. [...] Where an objection is raised, the reasons should, where possible, be supported specifically by a published document. ... A claim in generic form, i.e. relating to a whole class, e.g. of materials or machines, may be acceptable even if of broad scope, <u>if there is fair support in the description and there is no reason to suppose that the invention cannot be worked through the whole of the field claimed.</u>"</p>	<ul style="list-style-type: none"> ● Patent Act Article 42(4)(1) <p>"The claims shall be supported by the description."</p> <ul style="list-style-type: none"> ● Guidelines Chapter 2 Section 4.3 <p>"Whether a claimed invention is supported by the description shall be determined based on a view of a person skilled in the art on whether the matters corresponding to claimed invention are stated in the description. Whether the corresponding matters are stated in the description shall be determined by thoroughly reviewing whether an invention, <u>which is beyond the scope for a person skilled in the art to understand through the description, is claimed.</u>" ...</p>	<ul style="list-style-type: none"> ● Patent Act Article 36(6)(1) <p>claimed inventions shall not go beyond the scope of disclosure in the description.</p> <ul style="list-style-type: none"> ● Guidelines, Part II, Chapter 2, "Section 2 Support Requirement" <p>When it is determined that the <u>claimed invention goes beyond the "extent of disclosure in the description to which a person skilled in the art would recognize that the problem to be solved by the invention would be actually solved"</u>, it cannot be said that the claimed invention substantially corresponds to an invention that is stated in the description.</p>
2.(1)	<p>In the present case, the description mentions that "by blending the oily gelling agent to a cosmetic, the cosmetic can obtain a film-forming ability" (i.e. the technical effect). <u>In the absence of evidence that there are oily gelling agents which do not achieve this film-forming, an objection of lack of support should not be raised.</u></p>	<p>In this case, <u>the description explicitly states the oily gelling agent and provides examples thereof.</u> Therefore, it is obvious to a person skilled in the art that features written in the claim are supported by the statements of the description.</p>	<p>... a problem to be solved by the invention is recognized as providing a cosmetic that has a film-forming ability. It is the common general knowledge that an "oily gelling agent," which is recited in Claim 1, is dissolved in oil, and by blending it to a cosmetic, the cosmetic obtains a film-forming ability. With regard to the oily gelling agent, the description states (2) below. Additionally, specific examples comprising the oily gelling agent D1 are shown in the description. Accordingly, based on the statements in the description and the common general knowledge, a person skilled in the art would understand that, by blending an oily gelling agent which "can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C," to a cosmetic comprising the ingredients (A), (B), and (C), the cosmetic would obtain a film-forming ability. ...</p>
2.(2)	<ul style="list-style-type: none"> ● There is one example given of a gelling agent, From the section "issues to be considered", it appears that the example also discloses the suitability of this gelling agent for achieving the technical effect ...(GL, F-IV, 6.3). ● Other gelling agents are listed in the description. ... It is assumed that the agents D2-D7 are well-known compounds. There appears to be no information, neither in the application as filed, nor in the prior art, that there would be oily gelling agents that do not achieve the disclosed effect. The 	<p>The description explicitly states <u>the oily gelling agent and lists examples thereof</u> such as D1 (produced from ingredient E, F, G), D2, D3, D4, D5, D6 and D7. Although only one working example is given, the statements of the description and the working example are sufficient to meet the support requirements for the claim 1 and the claim 2.</p>	<p>With regard to the oily gelling agent, the description states that "[a]ny oily gelling agent, which can be dissolved ..."</p> <p>The following general technical knowledge is needed: cosmetics comprising the ingredients (A), (B), and (C) obtain a film-forming ability by blending an oily gelling agent which "can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C" to the cosmetics.</p>

	applicant should therefore be allowed to cover these obvious modifications (GL, F-IV, 6.2).		
3.(1)	N/A	N/A	N/A
3.(2)	N/A	N/A	N/A

	SIPO	USPTO
1.	Yes	Yes
Laws or Examination Guidelines	● Guidelines for Patent Examination Part II, Chapter 2, Section 3.2.1 for "Support in the Description"	● 35 U.S.C. 112(a) ● The Manual of Patent Examining Procedure (MPEP) §2163
Contents of the Laws or Examination Guidelines	● Guidelines "Support in the Description" "If the person skilled in the art can reasonably predict that all the equivalents or obvious variants of the <u>embodiments set forth in the description have the same properties or uses</u> , then the applicant shall be allowed to generalize the protection extent of the claim to cover all the equivalents or obvious variants", and "As for a broadly generalized claim relating to the whole class of products or machines, <u>if it is fairly supported by the description, and there is no reason to suppose that the invention cannot be worked through the whole of the field claimed</u> , then the claim may be acceptable even if its extent of protection is broad."	● 35 U.S.C. 112(a) "specification shall contain a written description of the invention ..." ● MPEP §2163 In order to satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that <u>the inventor had possession of the claimed invention as of the filing date sought</u> At the USPTO, <u>there is a presumption that an adequate written description of the claimed invention is present when the application is filed, and therefore, the Office has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize the written description of the invention as providing adequate support for the claimed invention</u> .
2.(1)	Therefore "oily gelling agent" defined in claim 1 is determined to meet the requirement of "Support in the Description" according to the guidelines stated above.	In this situation, a person having ordinary skill in the art could reasonably conclude that the inventor had possession of the invention of a composition. Paragraph 1 of the description states that any oily gelling agent which can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C can be used. Paragraphs 2 and 3 then further describe examples of oily gelling agents.
2.(2)	In regard to "oily gelling agent" written in the claim, the examples show only the oily gelling agent that is a composition produced from ingredients (E), (F), and (G). Nevertheless in other parts of the description, it describes that "Any oily gelling agent which can be dissolved ...", and "Examples of such oily gelling agents include D1...". <u>The person skilled in the art can reasonably predict that all the equivalents or obvious variants of the oily gelling agents set forth in the description have the same properties and can be used in the cosmetic to render the cosmetic film-forming ability</u> . Therefore "oily gelling agent" written in the claim can be supported by the description.	In the present example, the claim language "oily gelling agent" is in question. Paragraph 1 of the description states that any oily gelling agent which can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C can be used. Paragraphs 2 and 3 then further describe examples of oily gelling agents. The statements in the specification are adequate to sufficiently describe the claimed invention.
3.(1)	N/A	N/A
3.(2)	N/A	N/A

5. Analysis on IP5 Offices' Case Studies (Cases 1-3)

Overview

- Do the claimed inventions meet the support requirements?

	EPO	JPO	KIPO	SIPO	USPTO
Case 1	Yes	Yes	Yes	Yes	Yes
Case 2	No	Yes/No	Yes	Yes/No	Yes
Case 3	Yes	Yes	Yes	Yes	Yes

- JPO, KIPO and USPTO applied the same criteria to all of Cases 1-3. On the other hand, EPO and SIPO applied the criteria in accordance with each of the specific features of the Cases.

Only as for Case Study 2, the results were different among the IP5 Offices.

- EPO applied the criteria for chemical compounds defined by measurable parameters and determined that the claimed invention does not meet the sufficiency requirements rather than the validation of support requirement.
- SIPO determined that the invention does not meet the support requirements because SIPO applied the specific criteria when the improvement of a claim compared to the background art involves a numerical range.
- JPO determined that whether or not the invention meets the support requirements would differ depending on whether or not there is the common general technical knowledge, (which cannot be identified because Case Studies are based on hypothetical cases).

1. Case Study 1

(1) Summary of the results

All of the IP5 Offices determined that the claimed invention in Case Study 1 meets the support requirements.

(2) Comparative study on ways of examinations at the IP5 Offices

(i) Term to be examined

All of the IP5 Offices examined the term “repose angle” in the claim.

(ii) Way of thinking on applicable criteria

At the European Patent Office (EPO), the claim shall be regarded as supported by the specification, unless there are well-founded reasons for believing that persons skilled in the art, when the application was filed, would be unable to extend the particular teaching of the description to the whole of the field claimed by using routine methods of experimentation or analysis. Based on this, examiners may indicate a violation of the support requirements only if they are able to provide the well-founded reasons.

At the Japan Patent Office (JPO), the invention claimed in the patent application is considered to be a violation of the support requirements when in the written description of the specification, the claimed invention is determined to go beyond the extent of disclosure in the description to which persons skilled in the art would recognize that a problem to be solved by the invention would be actually solved.

At the Korean Intellectual Property Office (KIPO), the claimed invention is considered to be a violation of the support requirements when the description is determined to be beyond the scope for persons skilled in the art to understand through the description of the specification.

At the State Intellectual Property Office of the P.R.C. (SIPO), by taking into account the whole contents of the description, rather than merely the contents in the part of specific mode for carrying out the invention, when it can be established that the generalization of the claim is determined not to be appropriate viewed from the whole contents of the description, the claimed invention is considered to be a violation of the support requirements.

At the United States Patent and Trademark Office (USPTO), , in order “to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed”. . Also, when the application is filed, there is a presumption that an adequate written description of the claimed invention is present, and therefore, the USPTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize the written description of the invention as providing adequate support for the claimed invention.

(iii) Descriptions of specifications and the common general technical knowledge, on which judgment is based

The EPO regarded the repose angle to be the result largely influenced by average L/D ratio. Also, the EPO considered that, based on the examples, the result of the repose angle could be further reduced by getting the average L/D closer to 1. In addition, since there is no document showing that the skilled person would be unable to extend the description of the specification, there appear to be no well-founded technical reasons for a violation of the support requirements due to the absence of a lower limit of the repose angle.

The JPO recognized that, based on the description of the specification, a problem to be solved by the claimed invention would be providing a composition that has excellent fluidity and uniform dispersibility. Also, based on the description of the specification on the repose angle, the examples, and the common general technical knowledge that a smaller repose angle leads to more excellent fluidity and uniform dispersibility, the JPO determined that the claimed invention meets the support requirements.

The SIPO, based on the description of the specification, clearly recognized information that the smaller of the repose angle the better. In addition, based on the common general technical knowledge that the smaller the repose angel is, the more excellent fluidity the composition would have, the SIPO determined that the claimed invention meets the support requirements, although the specification discloses no example for composition having a repose angle of less than 43 degrees.

Both the KIPO and the USPTO provide that although no specific examples are disclosed about repose angles below 43 degrees in the specification, the description of the specification and the examples are adequate to meet the support requirements.

2. Case Study 2

(1) Summary of the results

The EPO indicated “No,” determining that the claimed invention “does not meet the support requirements.” The KIPO and the USPTO indicated “Yes,” determining that the invention “meets the support requirements.” The JPO and the SIPO indicated “both Yes and No.”

(2) Comparative study on ways of examinations at the IP5 Offices

(i) Term to be examined

All of the IP5 Offices examined a claim that “the ingredient (A) has a ratio (R) defined by the following formula (I) in a range of 40 to 65%.”

(ii) Way of thinking on applicable criteria

At the EPO, as for the claim relating to a known class of chemical compounds defined by measurable parameters, when the description of the specification does not disclose a technical teaching allowing the skilled person to manufacture those compounds complying with the parametric definition, and this is not feasible by applying the common general knowledge or routine experimentation, such a claim would be both technically not supported and not sufficiently disclosed.

Ways of thinking on applicable criteria of the JPO, the KIPO, and the USPTO are the same as those stated in Case Study 1.

The SIPO, in addition to the same way of thinking on applicable criteria stated in Case Study 1, adopted the way of thinking on applicable criteria, stipulating that, when the improvement of a claim compared to the conventional technology involves a numerical range, the description should give examples for the values near the both ends, and, when the range is broad, the description should give at least one example for an intermediate value.

(iii) Descriptions of specifications and the common general technical knowledge, on which judgment is based

The EPO determined that the claimed invention does not meet the support requirements. That is because, in the specification, although there are 1 or 2 examples, there is no indication or general teaching on how manufacturing conditions of ingredient (A) influence parameter R at all. Also, in order for the invention to be determined to meet the support requirements, the EPO mentioned that either of the following should be needed in the specification or the claim: (1) information on what factors influence parameter R; (2) examples showing how ingredient (A) was obtained; and (3) evidence that this is common general knowledge.

The JPO recognized that, based on the description of the specification, a problem to be solved by the claimed invention would be providing a composition that contributes to attaining higher speed workability compared to the conventional compositions of this kind. Also, if there is a common general technical knowledge that persons skilled in the art would recognize that the parameter R of the ingredient (A) is closely related to the high-speed workability and that, when R falls within the range of 40 to 65%, such workability becomes excellent, based on such general technical knowledge, the description of the specification and the examples, the JPO determined that the claimed invention meets the support requirements. If there is no such general technical knowledge, the JPO determined that the claimed invention does not meet the support requirements.

The SIPO recognized that, based on the description of the specification, the claimed invention meets the support requirements, although only one example is presented. That is because ingredient (A) is just a material for the composition and the person skilled in the art can obtain such kinds of ingredient (A) with parameter R in the range of 40-65% by adjusting various manufacturing conditions. Meanwhile, the SIPO determined that the claimed invention does not meet the support requirements when the contribution of the invention is to choose ingredient (A) with parameter R in the range of 40 to 65%, which renders the composition very good properties that cannot be predictable by persons skilled in the art. That is because only one example with parameter R of 54% cannot predict any composition being claimed when parameter R is not 54%.

The KIPO and the USPTO determined that the claimed invention meets the support requirements based on the description of the specification.

3. Case Study 3

(1) Summary of the results

All of the IP5 Offices determined that the claimed invention in Case Study 3 meets the support requirements.

(2) Comparative study on ways of examinations at the IP5 Offices

(i) Term to be examined

All of the IP5 Offices examined the term “oily gelling agent” in the claim.

(ii) Way of thinking on applicable criteria

The EPO, in addition to the same way of thinking on applicable criteria stated in Case Study 1, adopted a criteria stipulating that the applicant should be allowed to make a claim covering all obvious modifications of, equivalents to and uses of that which he has described in the specification, if it is reasonable to predict that all the variants covered by the claim have the properties or uses the applicant ascribes to them in the description.

The SIPO adopted a criteria stipulating that, when persons skilled in the art can reasonably predict that all the equivalents or obvious variants of the embodiments that are described in the specification have the same properties or uses, applicants should be allowed to generalize the scope of protection for their claims in order to cover all the equivalents or obvious variants.

In addition, the EPO and the SIPO adopted their way of thinking on an applicable criteria. That is, as for a generalized claim covering the whole class of materials or machines, if it is fairly supported by the description, and there is no reason to suppose that the invention cannot be worked through the whole of the field claimed, then the claim meets the support requirements.

Ways of thinking on applicable criteria of the JPO, the KIPO, and the USPTO are the same as those stated in Case Study 1.

(iii) Descriptions of specifications and the common general technical knowledge, on which judgment is based

The EPO determined that the claimed invention meets the support requirements. That is because the description of the specification mentions that the cosmetic can obtain a film-forming ability, i.e. the technical effect; and there is sufficiently well-founded, technical reasons that deny this effect. However, the EPO stated that the claim is a violation of clarity requirements because the term “oily gelling agent” does not form part of the common general technical knowledge.

The JPO recognized that, based on the statements in the description, a problem to be solved by the claimed invention is providing a cosmetic that has a film-forming ability. Then,

the JPO determined that the claimed invention meets the support requirements. That is because persons skilled in the art can understand that, by blending an oily gelling agent which “can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C)” to a cosmetic comprising the ingredients (A), (B), and (C), the cosmetic would obtain a film-forming ability, based on the description of the specification, specific examples comprising the oily gelling agent D1 are shown, and a common general technical knowledge that an oily gelling agent “can be dissolved in oil, and by blending an oily gelling agent to a cosmetic, the cosmetic can obtain a film-forming ability.”

The KIPO mentioned that examples of an oily gelling agent in the specification as well as the description of one working example are sufficient to determine that the invention meets the support requirements.

The SIPO, based on the description of the specification and the presentation of one working example, determined that the claimed invention meets the support requirements. That is because persons skilled in the art can reasonably predict that all obvious modifications of, and equivalents to, the oily gelling agent have the same properties and the effect that render the cosmetic film-forming ability.

The USPTO determined that the claimed invention meets the support requirements based on the description of the specification that “any oily gelling agent which can be dissolved in the ingredient (C) and can thicken or gelate the ingredient (C) at 25°C can be used,” as well as the description of the examples of oily gelling agents.

6. IP5 Users' Opinion on IP5 Offices' Case Studies (Cases 1-3)

1. User's Stance¹

- ✓ We judged whether each hypothetical case meets the ideal of support description requirement².
- ✓ Our judgments aren't based on Examination Guidelines of each patent office.

2. Results of user's review

	Description Support Requirement Sufficiency	Remarks
Case 1	Similar to IP5 offices' result	<ul style="list-style-type: none"> ● Claim defined by only either the upper limit or the lower limit of parameter meets description requirement, if a person having ordinary skill in the art can understand that it is not necessary to define the other in the specification.
Case 2	Inconclusive	<ul style="list-style-type: none"> ● Unlike case 1 and 3, we are not able to reach any unified opinion. ● Many of us commented that with only reference to the description in this hypothetical case, they cannot make any defined judgment (yes/no). Some suggests that we should look to more cases rather than going into in detail. ● In order to meet the written description requirement, the specification has to be described in such manner the person skilled in the art can understand that the invention has some effect in the parameter range defined in the claims ("Parameter Range"). ● The written description requirement may be satisfied if the specification includes a plurality of examples in the Parameter Range and a comparative example near the boundary of the Parameter Range. However, not all countries require "working examples".
Case 3	Similar to IP5 offices' result	<ul style="list-style-type: none"> ● The claim comprises a comprehensive term (i.e. "oily gelling agent"), and the term isn't specified in the claim. ● If the term described in the claim(s) is a general term and the performance to fulfil an element indicated by the term is understood from the description of the specification, the written description is satisfied even though such the term is not specified in the claim(s).

¹ The user's stance was compiled in each country by the following associations: the American Intellectual Property Association (AIPLA), the Business Europe (BE), the Intellectual Property Owners Association (IPO), the Japan Intellectual Property Association (JIPA), the Korea Intellectual Property Association (KINPA), and the Patent Protection Association of China (PPAC).

² The ideal of description requirement was determined by the users, and is not agreed by the IP5.

7. Summary of IP5 Offices' Case Studies (Cases 1-3)

1. Overview of judgment by users and IP5 Offices for each case

	Users	EPO	JPO	KIPO	SIPO	USPTO
Case 1	Yes	Yes	Yes	Yes	Yes	Yes
Case 2	Inconclusive	No	Yes/No	Yes	Yes/No	Yes
Case 3	Yes	Yes	Yes	Yes	Yes	Yes

2. Detail of judgment by users and IP5 Offices for each case

(1) Case 1

The users' judgment is that claim defined by only either the upper limit or the lower limit of parameter meets description requirement, if a person having ordinary skill in the art can understand that it is not necessary to define the other in the specification. It is also noted that the users' opinion does not mention from what specific perspectives the claimed invention is judged to meet the support requirement.

The IP5 Offices' judgments are somewhat different in terms of the way of thinking on applicable criteria, as well as descriptions of specifications and the common general technical knowledge on which judgment is based, as described in Section 5. However, the analysis on IP5 Offices' Case Studies (Cases 1-3)" shows that each of the IP5 Offices' judgments are made in a reasoned and analytical manner.

(2) Case 2

There are two perspectives of the judgment in this case.

One is the perspective whether or not the ingredient (A) which has a ratio (R) in a range of 40 to 65% can be manufactured even if no specific manufacturing conditions for ingredient (A) are written.

The other is the perspective whether or not the composition comprising ingredient (A) and ingredient (B) of the present invention exhibits all of excellent properties of the conventional composition of this kind, contributes to attain high-speed workability for a ratio (R) in all range of 40 to 65% based on only a ratio (R) of 54%.

The users' judgment is that, in order to meet the written description requirement, the specification has to be described in such manner the person skilled in the art can understand that the invention has some effect in the parameter range defined in the claims ("Parameter Range"). This is the judgment from the latter perspective. However, the users' judgment is that they are not able to reach any unified opinion, and many of them commented that with only reference to the description in this hypothetical case, they cannot make any defined judgment (yes/no).

The analysis of IP5 Offices' is as follows: (see Section 5. Analysis on IP5 Offices' Case Studies etc. of this report in detail.)

The EPO's judgment is that the claimed invention does not meet the sufficiency requirement, because there is no indication or general teaching on how manufacturing conditions of ingredient (A) influence parameter R at all. This is the judgment mainly from the former perspective.

According to the EPO's Guidelines F-IV, 6.2³, the EPO can judge from the latter perspective that the claimed invention meet the support requirement. On the other

³ The applicant should be allowed to cover all obvious modifications of, equivalents to and uses of that which he has described. In particular, if it is reasonable to predict that all the variants covered by the claims have

hand, according to Guidelines F-IV, 6.4⁴, as to case 2, if the judgment from the former perspective is conducted, the judgment from the latter perspective is not necessary.

The JPO's judgment changes due to whether or not there is a common general technical knowledge that a person skilled in the art would recognize that the parameter R of the ingredient (A) is closely related to the high-speed workability and that, when R falls within the range of 40 to 65%, such workability becomes excellent. This is the judgment mainly from the latter perspective.

The KIPO's judgment is that it is obvious to a person skilled in the art that features written in the claim with the numerical ranges are supported by the statements of the description, and the description explicitly states that the ratio (R) could be adjusted to some degree and could be in a range of 40 to 65%, so that the claim shall be deemed to meet the support requirement. This is the judgment from the former and latter perspective.

The SIPO's judgment is that the claimed invention meets the support requirement, because the person skilled in the art can obtain the ingredient (A) with parameter R in the range of 40-65% by adjusting manufacturing conditions. This is the judgment from the former perspective. On the other hand, the SIPO's judgment is that the claimed invention does not meet the support requirement, because when the contribution of the invention is to choose ingredient (A) with parameter R in the range of 40 to 65%, which renders the composition very good properties that cannot be predictable by persons skilled in the art, only one example with parameter R of 54% cannot predict any composition being claimed when parameter R is not 54%. This is the judgment from the latter perspective.

The USPTO's judgment is that a person having ordinary skill in the art could reasonably conclude that the inventor had possession of the invention of a composition which includes an ingredient (A) having a ratio defined by a specific formula in a range of 40 to 65%. This is the judgment mainly from the latter perspective.

In Cases 1-3, the judgment of the support requirement by users and IP5 Offices was asked, but the judgment from the former perspective becomes that of the enablement requirement depending on the offices.

Therefore, users and IP5 Offices judge meeting the support requirement from the said each perspective.

In other words, the judgment of the support requirement converges in the meaning of judging from two perspectives. However, as the users' judgment is that they are not

the properties or uses the applicant ascribes to them in the description, he should be allowed to draw his claims accordingly.

⁴ An objection under both Art. 84 and Art. 83 may also be justified. An example would be a claim relating to a known class of chemical compounds defined by measurable parameters, when the description does not disclose a technical teaching allowing the skilled person to manufacture those compounds complying with the parametric definition, and this is not otherwise feasible by the application of common general knowledge or routine experimentation. Such a claim would be both technically not supported and not sufficiently disclosed, regardless of whether the parametric definition meets the clarity requirement of Art. 84.

Whether the objection is raised as lack of support or as insufficiency is not important in examination proceedings...

able to reach any unified opinion, IP5 Offices' judgments change by which perspectives are adopted and the difference of interpretation of a common general technical knowledge and the description.

(3) Case 3

The users' judgment is that, if the term described in the claim(s) is a general term and the performance to fulfil an element indicated by the term is understood from the description of the specification, the written description is satisfied even though such a term is not specified in the claim(s). It is also noted that the users' opinion does not mention from what specific performance etc. the claimed invention is judged to meet the support requirement.

The IP5 Offices' judgments are somewhat different in terms of the way of thinking on applicable criteria, as well as descriptions of specifications and the common general technical knowledge on which judgment is based, as described in Section 5. However, the analysis on IP5 Offices' Case Studies (Cases 1-3)" shows that each of the IP5 Offices' judgments are made in a reasoned and analytical manner.

3. Current status and future of written requirement in PHEP

In PHEP, the discussion has been advanced based on not only the opinions of the Offices but also the opinions of the users.

Currently, in addition to Cases 1 to 3, the IP5 Offices have continued to conduct further studies on the clarity and support requirement of the IP5 Offices through the hypothetical case studies of Cases 4 to 6. It is also considered to start studies on the enablement requirement as further hypothetical case studies. At the PHEP meeting held in November 2017, the IP5 Offices agreed to consider as future possibilities, suggesting desirable directions of harmonization or elaborating common case examples.

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