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Meunier Carlin & Curfman LLC 999 Peachtree Street NE Suite 1300 Atlanta, GA 30309			KUGEL, TIMOTHY J	
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SNF HOLDING COMPANY  
Requester and Respondent

v.

CIBA SPECIALITY CHEMICALS  
WATER TREATMENTS LIMITED  
Patent Owner and Appellant

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Appeal 2020-000001  
Reexamination Control 95/002,219  
Patent 8,067,215 B2  
Technology Center 3900

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Before RICHARD M. LEBOVITZ, RAE LYNN P. GUEST, and  
WESLEY B. DERRICK, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON REQUEST FOR REHEARING

This is a decision on the Request for Rehearing under 37 C.F.R. § 41.79 (“2020 Req. Reh’g”) by Patent Owner of the § 41.77(f) Decision entered January 22, 2020 (“2020 41.77(f) Dec.”). In addition to this decision, there are two previous decisions in this *inter partes* reexamination proceeding, the first entered August 1, 2016 (containing new grounds of

rejection) (“2016 Dec.”), and the second, also under § 41.77(f) entered April 30, 2018 (also containing new grounds of rejection).

The Request for Rehearing is GRANTED-IN-PART.

#### STATEMENT OF THE CASE

The claims stand rejected as follows:

1. Claims 1–8, 10, 15, 17–25, 27, 30, 35, and 37–49 under pre-AIA 35 U.S.C. § 103(a) as obvious in view of JP ’714.
2. Claims 1–46 under pre-AIA 35 U.S.C. § 103(a) as obvious in view of WO ’680, JP ’714, Munk, Kulicke, and Watanabe ’855.
3. Claims 18 and 47 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.
4. Claims 1, 7, 18, and 46 under 35 U.S.C. § 314(a) as enlarging the scope of the claims of the ’215 patent.<sup>1</sup>

Amended claim 1 is reproduced below (underlining and brackets is relative to the original claim; indentations have been added for clarity):

1. A process for preparing a [polymer] homopolymer or copolymer of an ethylenically unsaturated monomer, in which the monomer includes a (meth)acrylamide monomer [is] obtained from a nitrile substrate that can be converted into the

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<sup>1</sup> The Examiner listed claims 1 and 7 in the body of the rejection, but noted in a footnote that claims 18 and 46 had the same phrasing recited in claim 1 that the Examiner found to enlarge the scope of the claim. 2019 Examiner Determination under 37 C.F.R. § 41.77(d) mailed April 17, 2019 (“2019 41.77d Determination”) 9, n.19. Therefore, we consider all the claims to have been rejected under § 314(a). Inadvertently, in the 2020 41.77(f) Dec. at 3 and 20, the rejected claims were misstated.

ethylenically unsaturated monomer in a biocatalysed reaction using a biocatalyst, which substrate is (meth)acrylonitrile, wherein the biocatalyst comprises a nitrile hydratase enzyme and whole cells, fractured cells, or a combination thereof, [or a fermentation process], and

wherein the monomer contains [cellular material and/or components of] the biocatalyst and a fermentation broth[,] from a fermentation process used to produce the biocatalyst, and

forming the polymer by polymerising the ethylenically unsaturated monomer or a monomer mixture comprising the ethylenically unsaturated monomer and [cellular material and/or components of a] the fermentation broth in the presence of a redox and/or thermal initiator and

the formed polymer exhibits an intrinsic viscosity of at least 3 dl/g measured using a suspended level viscometer in 1 M sodium chloride at 25°C.

#### REJECTION UNDER 35 U.S.C. § 314(a)

Under pre-AIA 35 U.S.C. § 314(a), “[i]n any inter partes reexamination proceeding under this chapter, the patent owner shall be permitted to propose any amendment to the patent and a new claim or claims, except that no proposed amended or new claim enlarging the scope of the claims of the patent shall be permitted.” In response to the amendment to the claims filed May 18, 2018 by Patent Owner, the Examiner rejected claims 1, 7, 18, and 46 as enlarging the scope of the claims of the patent in contravention of § 314(a). 2019 41.77d Determination 9. The Examiner’s rejection was affirmed in the 2020 41.77(f) Decision. Patent Owner requests reconsideration of this decision.

The rejection of claim 1 under § 314(a) was based on the following amendment to the claim:

A process for preparing a [polymer] homopolymer or copolymer of an ethylenically unsaturated monomer, in which the monomer includes a (meth)acrylamide monomer [is] obtained from a nitrile substrate that can be converted into the ethylenically unsaturated monomer in a biocatalysed reaction using a biocatalyst, which substrate is (meth)acrylonitrile

For comparison, the original claim language is as follows:

A process for preparing a polymer of an ethylenically unsaturated monomer, in which the monomer is obtained from a biocatalysed reaction or a fermentation process

The original claim language required that the ethylenically unsaturated monomer is “obtained” from a biocatalysed reaction or a fermentation process. The amended claim now requires that the ethylenically unsaturated monomer “includes” a monomer that “can be converted” into the monomer in a biocatalysed reaction. The “(meth)acrylamide monomer” in amended claim 1 is a species of the “ethylenically unsaturated monomer” in claim 1 as originally claimed. *See* original claim 8 (“A process according to claim 1 in which the ethylenically unsaturated monomer is (meth)acrylamide monomer.”).

Patent Owner points out that the “can be converted” language is present in original claim 2, which depends from claim 1, and therefore cannot be a broadening amendment. 2020 Req. Reh’g 12–13. We agree with Patent Owner as to the scope of original claim 2, but, as explained below, the scope of the amended claim is still enlarged in comparison to the original claim.

The claim amendment added the term “includes” to indicate that the ethylenically unsaturated monomer used in the reaction “includes”

(meth)acrylamide monomers obtained from the biocatalysed reaction. The term “includes” is open-ended and therefore the ethylenically unsaturated monomer of the claim can contain ethylenically unsaturated monomers from sources other than the (meth)acrylamide monomers obtained from the biocatalytic reaction. The original claim language was more restrictive because it expressly stated that the source of the ethylenically unsaturated monomer was from “a biocatalysed reaction or a fermentation process.” The scope of the amended claim has therefore been enlarged because it is not limited to the use of ethylenically unsaturated monomers from a biocatalysed reaction or a fermentation process, but includes the use of ethylenically unsaturated monomers obtained from other sources. Accordingly, the rejection of claim 1 under 35 U.S.C. § 314(a) is affirmed.

With respect to claims 18 and 46, as discussed by the Requester, the Examiner indicated that these claims contained the same language as claim 1 (*see* fn. 1 above) and therefore Patent Owner was on notice that these claims had the same defect under § 314(a). Requester’s Comments on Req. Reh’g 7–8. Thus, while there was no explicit statement by the Examiner that claims 18 and 46 were rejected under § 314(a), it would have been evident that their omission from the Examiner’s statement was an inadvertent error. The claims were also included in the statement of the rejection in the 2020 41.77(f) Decision at page 3. These claims therefore remain rejected, as well.

The rejection of claim 7 as enlarging the scope of the original claim was based on the following amendment:

A process according to claim 1 in which the [components of] the fermentation broth comprises ingredients used for culturing a microorganism, the ingredients including (i) [are selected from

the group consisting of] sugars, polysaccharides, or mixtures thereof; (ii) proteins, peptides, amino acids, nitrogen sources, and mixtures thereof; (iii) inorganic salts (including metal salts)[, ]; and (iv) optionally vitamins, growth regulators, enzyme inducers, [and] complex fermentation medium components, and mixtures thereof.

The original claim language is as follows:

7. A process according to claim 1 in which the components of the fermentation broth are selected from the group consisting of sugars, polysaccharides, proteins, peptides, amino acids, nitrogen sources, inorganic salts (including metal salts), vitamins, growth regulators, enzyme inducers and complex fermentation medium components.

The Examiner found that the claim scope was enlarged because the closed Markush-type transitional phrasing of “selected from the group consisting of” in the original claim is replaced with “the inclusive, open-ended phrasing” of “comprises . . . including” in the amended claim. 2019 41.77(d) Determination 9.

We agree with Patent Owner that we erred in affirming the rejection of claim 7. As explained by Patent Owner, for a claim to be broadened under pre-AIA 35 U.S.C. § 314(a), the claim must cover an embodiment not encompassed by the original claims of the patent. For a dependent claim, a proper analysis for broadening is not whether the dependent claim in question is broader than the original version of that dependent claim, but whether the dependent claim in question is broader than any of the original claims. The Examiner did not make the finding that claim 7, as amended, is broader than original claim 1. Original claim 1 did not restrict the ingredients or components present in the fermentation broth. Therefore

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naming specific ingredients in claim 7 does not enlarge the scope of claim 1. The rejection of claim 7 under § 314(a) is reversed.

#### WRITTEN DESCRIPTION

Claims 18 and 47 were rejected by the Examiner as not complying with the written description requirement of 35 U.S.C. § 112, first paragraph, because there is no upper limit recited in the claim limitation “wherein the fermentation broth is present in the monomer mixture in an amount of at least 5% by weight.” 2019 41.77(d) Determination 8. The Examiner found that the only support for the recited range in the ’215 patent is for a range up to 20% by weight. *Id.* We affirmed the rejection. 2020 41.77(f) Decision 6.

Patent Owner argues, apparently for the first time, that there is an additional example in which a monomer of about 75% by weight of the fermentation broth was used. 2020 Req. Reh’g 17. “Arguments not raised in the briefs before the Board and evidence not previously relied upon in the briefs are not permitted in the request for rehearing except as permitted by paragraphs (b)(2) and (b)(3) of this section.” 37 C.F.R. § 41.79(b)(1). Appellant has not shown that paragraphs (b)(2) and (b)(3) are applicable. The introduction of the new evidence, therefore, is impermissible.

Nonetheless, even if we were to consider this new evidence, it is still insufficient to provide written descriptive support for the complete range because the recited range has no upper limit and Appellant did not establish that the ’215 patent provides support for values above about 75% by weight of monomer. Because the Examiner had a basis to reject the claims as lacking written description, Patent Owner has the rebuttal burden of showing



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that a person of ordinary skill in the art would have recognized that the inventors invented the limitation of a monomer “in an amount of at least 5% by weight,” a range in excess of the expressly described upper limits. *In re Wertheim*, 541 F.2d 257, 262 (CCPA 1976). The burden has not been met.

#### OBVIOUSNESS BASED ON WO’680, JP ’714, MUNK, KULICKE, AND WATANABE ’855

A new grounds of rejection was not made with respect to this rejection and thus prosecution was not reopened.

Patent Owner makes the same arguments in the Request for Rehearing that we have already considered and determined not to be persuasive.

The Decision entered Aug. 1, 2016, explains the basis of the rejection. 2016 Dec. 27–28. The additional evidence provided by Appellant and considered in the 2020 41.77(f) Decision at pages 9–14 further supports the obviousness of using fermentation broth in the claimed process of preparing a homopolymer or copolymer. Although the cited evidence is not part of the formal statement of the rejection, obviousness is based on “the scope and content of the prior art” (*Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)), and the publications introduced by Appellant are, by their admission, part of the pertinent scope and content of the prior art.

#### OBVIOUSNESS BASED JP ’714

In affirming the obviousness rejection based on JP ’714, Appellant contends the Decision erred in failing to properly balance the probative weight of Patent Owner’s evidence against the evidence relied upon by the

Board. Req. Reh’g 23. Appellant, however, fails to identify any flaw in the fact-finding and reasoning set forth in the Decision, other than to say that the statement in JP ’714 about the presence of fermentation broth is ambiguous. *Id.* at 24. However, Patent Owner does not address their own evidence introduced into this record, which is part of the scope and content of the prior art, that fermentation broth can be present during monomer polymerization.<sup>2</sup> Patent Owner therefore does not establish that we erred in affirming the rejection.

#### CLAIMS 18 AND 47–49

Claim 18 recites “wherein the fermentation broth is present in the monomer mixture in an amount of at least 5% by weight.” Dependent claims 47–49 recite that “the fermentation broth present in the monomer or the monomer mixture” is in an amount of at least 5% by weight and 5% to 20% by weight.” Patent Owner argues that the Board erred by not considering the patentability of claims 18 and 47–49 separately. Req. Reh’g 24–25. This argument is not correct. The claims were considered separately.

The 2020 41.77(f) Decision cited WO ’716, a publication introduced into evidence by Patent Owner. The 2020 Decision described the disclosure in WO ’716:

WO ’716 thus teaches that a “nitrile hydratase producing microbial catalyst in which the content of monosaccharide is 5% by mass or less” (WO ’716, p. 6) is used to produce the monomer

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<sup>2</sup> “Therefore, WO ’716 teaches that a fermentation broth (“microbial culture liquid”) can be present during polymerization to produce a *high molecular weight* [polymer] as long as long the content of monosaccharide in it is below a specific amount, and sets forth different limits, including 500 ppm or 5% by mass.” 2020 41.77(f) Dec. 13.

and the resulting monomer having 500 ppm saccharide or less is used to make “high molecular weight” polymer (WO ’716, p. 10). The monosaccharide may be from the culture liquid used to make the microbial catalyst (WO ’716, p. 7: “nitrile hydratase producing microbial catalyst is used for which the content of monosaccharide derived from the microbial culture liquid is 5% by mass or less, and preferably 3% by mass or less”). The “microbial liquid culture” is fermentation broth. Therefore, WO ’716 teaches that a fermentation broth (“microbial culture liquid”) can be present during polymerization to produce a *high molecular weight* [polymer] as long as long the content of monosaccharide in it is below a specific amount, and sets forth different limits, including 500 ppm or 5% by mass.

2020 41.77(f) Dec. 13.

The 2020 Decision then addressed claims 18 and 47–49, stating that Patent Owner “did not distinguish these amounts of monosaccharide [in WO ’716], and the accompanying fermentation broth in which the monosaccharide resides, from the amounts of fermentation broth recited in the claims.” *Id.* at 14. Patent Owner, in the Request for Rehearing, did not respond to this determination.

## CONCLUSION

We considered Appellant’s Request for Rehearing of the 2020 41.77(f) Decision. We grant it only to the extent we reverse the rejection of claim 7 under 35 U.S.C. § 314(a), but decline to modify our 2020 Decision with respect to any of the other rejections, including the other affirmed rejections of claim 7.

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In summary:

<b>Claim(s) Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1-8, 10, 15, 17-25, 27, 30, 35, 37- 49	103	JP '714	1-8, 10, 15, 17-25, 27, 30, 35, 37- 49	
1-46	103	WO '680, JP '714, Munk, Kulicke, and Watanabe '855	1-46	
18, 47	112, first paragraph	Written description	18, 47	
1, 7, 18, 46	314(a)	Enlarging scope of claim	1, 18, 46	7
<b>Overall Outcome</b>			1-49	

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