IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF KANSAS

CONAGRA FOODS FOOD INGREDIENTS COMPANY, INC.,

Plaintiff,

vs.

ARCHER-DANIELS-MIDLAND COMPANY,

Defendant.

Case No. 12-cv-2171-EFM-KGS

MEMORANDUM AND ORDER

Plaintiff ConAgra Foods Food Ingredients Company, Inc. ("ConAgra") and Defendant Archer-Daniels-Midland Company ("ADM") are competing manufacturers in the field of agriculture that sell wheat flour to customers who use the flour to manufacture products sold to consumers. ConAgra is the owner of U.S. Patent Nos. 8,017,172 (the " '172 Patent"), 8,252,360 (the " '360 Patent"), and 8,404,298 (the " '298 Patent"), all entitled "Whole Grain Flour and Products Including the Same." These patents generally claim a whole wheat flour product with the characteristics of white or "refined" flour.

ConAgra alleges that ADM is infringing its '172, '360 and '298 Patents through the making, using, selling, and offering for sale of white whole wheat flour products, including ADM's Kansas Diamond White Whole Wheat Flour. This matter is currently before the Court

on the parties' request that the Court construe various terms in the '172 and '360 Patents' (the "Patents' ") claims as a matter of law pursuant to *Markman v. Westview Instruments, Inc.*¹ The Court has thoroughly considered the information submitted in the parties' briefs as well as the oral arguments presented at the *Markman* hearing on May 17, 2013, and construes the disputed terms as set forth below.

I. Legal Standard

The first step in a patent infringement action is to determine the meaning and scope of the asserted patent's claims.² Claim construction is an issue of law for the Court to decide.³ Only after the Court has properly construed a patent's claims may it determine whether the accused method or product infringes the claim as properly construed.⁴

The Federal Circuit Court of Appeals set forth a comprehensive guide for claim construction in *Phillips v. AWH Corp*.⁵ In *Phillips*, the Federal Circuit reiterated that the claims of the patent define the patentee's invention, and to that end, claim construction begins with the claim language itself.⁶ The words of a claim "are generally given their ordinary and customary meaning,"⁷ and "the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention,

⁵ 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

⁶ *Id.* at 1312.

⁷ *Id.* (quotation omitted).

¹ 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

² *Markman*, 52 F.3d at 976.

³ *Id.* at 979.

⁴ *Id.* at 976.

i.e., as of the effective filing date of the patent application."⁸ "The claims themselves provide substantial guidance as to the meaning of particular claim terms."⁹ Both "the context in which a term is used in the asserted claim" and "the [o]ther claims of the patent in question" are helpful for understanding the ordinary meaning of a term.¹⁰

"The claims do not stand alone, but are part of 'a fully integrated written instrument." "¹¹ Thus, they must be read in view of the specification, which the Federal Circuit has stated is the primary basis for construing the claims.¹² The specification may reveal a special definition that a patentee has given a claim term that is different from the meaning the term would otherwise possess.¹³ In that instance, the patentee's definition controls. Or, the specification may reveal "an intentional disclaimer, or disavowal of claim scope" by the patentee.¹⁴ In that instance, as well, the patentee's intention, as expressed in the specification, is dispositive.¹⁵ But, the Federal Circuit has "expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment."¹⁶

- ⁸ *Id.* at 1313.
- ⁹ *Id.* at 1314.
- 10 Id.
- ¹¹ *Id.* at 1315 (quotation omitted).
- ¹² Id.
- ¹³ *Id.* at 1316.
- ¹⁴ *Id*.
- ¹⁵ *Id*.

¹⁶ *Id.* at 1323.

A court "should also consider the patent's prosecution history, if it is in evidence."¹⁷ This consists of "the complete record of the proceedings before the PTO and includes the prior art cited during examination of the patent."¹⁸ The prosecution history provides "evidence of how the PTO and the inventor understood the patent."¹⁹ Because, however, the prosecution history is an on-going negotiation between the patentee and the patent examiner, "it lacks the clarity of the specification and thus is less useful for claim construction purposes."²⁰ Regardless, the "prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be."²¹

Finally, a court may rely on extrinsic evidence, which consists of "all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises."²² Within this class, dictionaries and treatises may be useful to claim construction.²³ The Federal Circuit has found that technical dictionaries may provide a court a way "to better understand the underlying technology" and the way in which one of skill in art might use the claim terms."²⁴ And, extrinsic evidence in the form of expert testimony can provide background on the technology at issue, explain how an invention works, or establish that

- ¹⁷ *Id.* at 1317.
- ¹⁸ *Id*.
- ¹⁹ *Id*.
- ²⁰ *Id*.
- ²¹ Id.
- ²² Id.
- ²³ *Id.* at 1318.
- ²⁴ *Id*.

a particular term in the patent or prior art has a particular meaning in the pertinent field.²⁵ But, "conclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court."²⁶ Overall, although "extrinsic evidence can shed useful light on the relevant art, . . . it is less significant than the intrinsic record in determining the legally operative meaning of claim language."²⁷

II. Analysis

The parties ask the Court to construe thirteen terms from the '360 and '172 Patents' claims.²⁸ The majority of these terms are found in claim 1 of the '360 Patent and claim 35 of the '172 Patent.

Claim 1 of the '360 Patent states:

1. A whole grain wheat flour produced from cleaned wheat kernels comprising:

a coarse fraction including primarily bran and germ;

a *fine fraction* including primarily endosperm;

a particle size distribution such that *at least* 98 *wt* % of the *whole grain wheat flour* is less than or equal to $212 \,\mu$ m; and

substantially the same proportions of natural constituents, other than moisture, as the cleaned *wheat kernels*.²⁹

²⁵ *Id*.

²⁶ *Id*.

²⁹ '360 Patent, Doc. 55-3, p. 26, col. 23, ll. 7-16 (emphasis added).

²⁷ *Id.* (quotation omitted).

²⁸ At the *Markman* hearing, ConAgra informed the Court that it has withdrawn its infringement contention for claim 1 of the of the '172 Patent and its dependent claims, and thus, the Court no longer need to construe the terms "mixed wheat," "unclassed wheat," "homogenously," "jet sieve," and "refined flour constituent." ADM agreed to this stipulation with the exception of the term "refined flour constituent." The Court, however, has not found the term "refined flour constituent" in the remaining claims at issue in the '172 Patent or in any of the claims of the '360 and '298 Patents, and therefore declines to construe the term.

Claim 35 of the '172 Patent states:

35. A *coarse fraction* milled from whole grain *wheat kernels*, the *coarse fraction* comprising:

at least 97% by weight bran and germ;

a particle size distribution such that *at least about 97%* of particles by weight of the *coarse fraction* are less than 212 micrometers; and

substantially the same proportions of natural constituents, other than moisture, as compared to the bran and germ of the whole grain *wheat kernels* and a measured ash value that is *at least 97%* of an *expected ash value* for the whole grain *wheat kernels*.³⁰

The Court has divided the disputed terms into four categories based on the parties' discussion of them in their briefs. These categories consist of: (1) terms containing the term "fraction;" (2) the numerical limitations; (3) the alleged indefinite terms; and (4) the remaining disputed terms. The Court addresses each term within these categories below.³¹

A. "Coarse Fraction," "Fine Fraction," and "Fraction"

The parties dispute whether the Court should construe the terms "coarse fraction" and "fine fraction," found in claims 1, 14, 27, and 39-42 of the '360 Patent, or whether the Court should construe the singular term "fraction." ConAgra asserts that the terms "coarse fraction" and "fine fraction" are defined by the claims themselves and thus should be given their ordinary and customary meaning. It argues that the real dispute between the parties is the term "fraction" and proposes that the Court construe this term to mean *a portion of something*. ADM proposes that the term "coarse fraction" means *a portion of the wheat kernel that is isolated and*

³⁰ '172 Patent, Doc. 55-2, p. 27, col. 26, ll. 19-31(emphasis added).

³¹ Each term appears in multiple claims within the same patent or patents. The parties have not offered different constructions depending on the particular claims in which the term is found. Therefore, the Court's construction is assigned to each term wherever it appears in the claims at issue.

separately milled from a fine fraction and that the term "fine fraction" means the endosperm portion of the wheat kernel that is isolated and separately milled from a coarse fraction and has a particle size in which not less than 98% passes through a cloth designated 212 micrometers (U.S. Wire 70).

1. ADM's Proposed Processing Limitations

ADM's proposed constructions for the terms "coarse fraction" and "fine fraction" both include the processing limitation that a portion of the wheat kernel is isolated and separately milled. ADM argues that the inclusion of this processing limitation is supported by both the Patents' specifications and '172 Patent's prosecution history. With regard to the Patents' specifications, ADM argues that the specifications teach separate fine and coarse fractions because they state in one embodiment that "the coarse fraction being blended with the refined flour constituent, wherein 98% of the particles by weight of the whole grain flour are less than 212 micrometers"³² and that in an exemplary embodiment "the coarse fraction may be blended with the refined flour constituent."³³ ADM also cites to a portion of the '172 Patent's specification describing a two-step milling process (a process where the endosperm is separated from the bran and germ and the bran and germ are then further milled to reduce particle size):

For example, the present invention may implement a two-stream milling technique, as shown in FIG. 4, to grind the coarse fraction. In a present embodiment, after the coarse fraction has been separated from the refined flour, the coarse fraction is stabilized. Once the coarse fraction is separated and stabilized, the coarse fraction is then ground through a grinder, preferably a gap mill, to form a coarse fraction having a particle size distribution less than or equal to about 500 micrometers.³⁴

³² '172 Patent, Doc. 55-2, p. 16, col. 3, ll. 17-20.

³³ '172 Patent, Doc. 55-2, p. 17, col. 5, ll. 26-29.

³⁴ '172 Patent, Doc. 55-2, p. 18, col 8, ll. 6-14.

ADM also argues that when the Patents describe a single stream milling process, they do not use the phrase "coarse fraction" or "fine fraction." These terms are only used when referring to a two-step milling process.

With regard to the prosecution history, ADM asserts that the inventors argued, on several occasions, that the claims were limited to a two-step milling process involving a separate, isolated coarse fraction. ADM cites the inventors' response to three different office actions in which the inventors of the '172 Patent distinguished their invention from a prior art patent referred to as Chigurupati I. The office action responses all contain the following language:

[T]he Office Action alleges it would have been within the skill of the ordinary worker to siphon off the coarse fraction as allegedly disclosed in Chigurpati I as the bran and germ are removed for further milling to achieve the right particle size. . . . Applicants do not agree.

Chigurupati I does not disclose or suggest an isolated ultra-fine milled coarse fraction, separately milling a coarse fraction, bran fraction, and/or germ fraction to achieve reduced particle size, or that the process is suitable for separately milling a coarse fraction, bran fraction, and/or germ fraction to achieved reduced particle size. The coarse fraction in Chigurupati I is always ground with the fine fraction and contains a significant portion of the milled fine fraction...³⁵

ADM argues that ConAgra cannot tell the patent office that Chigurupati I is distinguishable from

the '172 Patent's claims because it uses a two-step milling process, but then later, during this

litigation, assert that the patent covers a single-stream milling process that does not isolate and

separately mill the coarse fraction.

The Court finds that neither the Patents' specification nor the '172 Patent's prosecution history requires the inclusion of ADM's proposed processing limitation into the meaning of the terms "coarse fraction" and "fine fraction." First and most importantly, the statements made

³⁵ Office Action Responses, Doc. 59-1, pp. 22, 50, 89.

during the prosecution of the '172 Patent do not represent the clear and unmistakable disavowal of claim scope such that the doctrine of prosecution history disclaimer limits the Patent's claims. Under the doctrine of prosecution history disclaimer, the ordinary meaning of a claim term is narrowed when the patentee unequivocally disavowed a certain meaning of that term during prosecution in order to obtain a patent.³⁶ In other words, the ordinary meaning of the claim term is narrowed so that it is congruent with the scope of the patentee's surrender during prosecution.³⁷ The standard for applying prosecution disclaimer is high.³⁸ Indeed, the Federal Circuit has stated that "for prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable."³⁹ The alleged disavowing statement must be clear enough to show "reasonable clarity and deliberateness" and "so unmistakable as to be unambiguous evidence of disclaimer."⁴⁰

Here, the cited passage from the office action response is not a clear disavowal of a single-step milling process. The inventors of the '172 Patent were distinguishing Chigurupati I based on the fact that the product claimed in Chigurupati I failed to retain all of the nutrients of the bran and germ. This distinction does not disavow every one-step milling process. Thus, the office action response is not "so unmistakeable to be unambiguous evidence of disclaimer" such that the doctrine of prosecution disclaimer applies.

³⁶ Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1325 (Fed. Cir. 2003).

³⁷ *Id*.

³⁸ *Id*.

³⁹ *Id.* at 1325-26.

⁴⁰ *Id.* at 1325.

Furthermore, the passages cited by ADM from the Patents' specifications do not support the imposition of a processing limitation into the claim language. ADM's reliance on the Patents' specifications is limited to descriptions of the preferred embodiments. Both the Federal Circuit and this Court have found that the mere fact that a specification teaches a particular embodiment (or even a preferred embodiment) is not sufficient to justify limiting an otherwise broad claim scope to the particular embodiment taught.⁴¹ Here, the language cited by ADM from the Patents' specifications states that a two-step milling process is a "preferred embodiment" and "may" be used to make the present invention. This is not enough to support ADM's proposed construction. Moreover, ADM's proposed processing limitations actually contradict the Patents' specifications, which state that "[t]he whole grain flour of the present invention may be produced via a variety of milling processes"⁴² and "[i]t is contemplated that the whole grain flour, coarse fraction and/or grain products of the present invention may be produced by a number of milling processes "⁴³ Accordingly, the Court declines to construe the terms "coarse fraction" and "fine fraction" to require a portion of the wheat kernel to be isolated and separately milled.

2. ADM's Proposed Particle Size Limitation

For the term "fine fraction," ADM also seeks to impose a particle size limitation. The second half of ADM's proposed definition for the term requires *a particle size in which not less*

⁴¹ See Eolas Tech, Inc. v. Microsoft Corp., 399 F.3d 1325, 1336-37 (Fed. Cir. 2005), cert. denied, 546 U.S. 998 (2005) (refusing to limit construction of term "stand-alone computer" even if all embodiments in the specification described "stand-alone computers"); *MGP Ingredients, Inc. v. Mars, Inc.*, 494 F. Supp. 2d 1231, 1236-38 (D. Kan. 2007) (finding that claims were not limited to "nonedible" articles even though specification sometimes described the invention as "nonedible" while other parts were not so limiting).

⁴² '360 Patent, Doc. 55-3, p. 20, col. 12, ll. 12-13.

⁴³ '360 Patent, Doc. 55-2, p. 20, col. 12, ll. 39-41.

than 98% passes through a cloth designated 212 micrometers (U.S. Wire 70). ADM adopted this language from the Food and Drug Administration's regulation defining the term "refined flour." ADM contends that the Patents' specifications show that the term "fine fraction" is synonymous with the term "refined wheat flour" or "refined flour constituent" and that the inventors recognized and adopted the FDA's requirement because the specifications particularly reference the regulation when they state:

The Food and Drug Administration (FDA) requires flour to meet certain particle size standards in order to be included in the category of refined wheat flour. The particle size of refined wheat flour is described as flour in which not less than 98% passes through a cloth having openings not larger than those of woven wire cloth designated '212 micrometers (U.S. Wire 70).⁴⁴

The Court declines to adopt ADM's proposed particle size limitation when construing the term "fine fraction." The proposed limitation is redundant with the language of the claims themselves. Each claim that includes the term "fine fraction" also includes the requirement that there is "a particle size distribution such that at least 98 wt % of the whole grain wheat flour is less than or equal to 212 μ m."⁴⁵ Because this claim limitation is synonymous with ADM's proposed particle size distribution limitation, the limitation is unnecessary. Therefore, the Court declines to include the particle size limitation in the definition of "fine fraction."

3. Construction of "Coarse Fraction" and "Fine Fraction"

Although the Court declines to adopt ADM's proposed constructions for "coarse fraction" and "fine fraction," it also cannot give these terms their ordinary and customary meaning or simply limit construction to the term "fraction" as ConAgra asserts it should. The Court believes that "coarse fraction" and "fine fraction" are technical terms for which a jury may

⁴⁴ '172 Patent, Doc. 55-2, p. 16, col 4, ll. 50-56; '360 Patent, Doc. 55-3, p. 16, col. 4, ll. 50-56.

⁴⁵ '360 Patent, Doc. 55-3, pp. 26-27, col. 23, ll. 12-13, col. 24, ll. 27-28, col. 25, ll. 39-40.

not appreciate an "ordinary" meaning.⁴⁶ At the *Markman* hearing, upon questioning from the Court, ConAgra proposed that the term "coarse fraction" be construed to mean *a portion of the wheat kernel that includes primarily bran and germ* and that the term "fine fraction" be construed to mean *a portion of the wheat kernel that includes primarily endosperm*. The Court finds that these definitions are consistent with the claim language of the '360 Patent and therefore adopts these constructions for the terms.⁴⁷

B. The Numerical Limitations

1. "At Least 98 Wt %" and "At Least 96 Wt %"

Claims 1, 4, 14, 17, 27, 29, and 39 in the '360 Patent contain a limitation requiring that "at least 98 wt % of the whole grain wheat flour has a particle size less than or equal to [x] μ m."⁴⁸ In addition, claim 42 in the '360 Patent contains a limitation requiring "at least 96 wt % of the coarse fraction has a particle size less than or equal to 150 μ m."⁴⁹ ConAgra asks the Court to construe the claim term "at least 98 wt %" to mean 98 wt % or greater, +/- 5% variance or 93 wt % or greater. ADM argues that the term should be construed to mean 98 wt % or greater. Similarly, ConAgra asks the Court to construe the claim term "at least 96 wt %" to mean 96 wt % or greater, +/- 5% variance or 91 wt % or greater. ADM argues that "at least 96 wt %" should mean 96 wt % or greater. Because the parties do not dispute that the term "at

⁴⁶ See Layne Christensen Co. v. Bro-Tech Corp., 2011 WL 3022445, at *3 (D. Kan. July 22, 2011) (construing terms after finding that they are "technical and would not be easily or commonly understood by jurors").

⁴⁷ See Phillips, 415 F.3d at 1314 ("The claims themselves provide substantial guidance as to the meaning of particular claim terms.").

⁴⁸ '360 Patent, Doc. 55-3, pp. 26-27, col. 23, ll. 12-13, col. 24, ll. 27-28, ll. 38-39, col. 25, ll. 47-48, col. 26, ll. 47-48 (emphasis added).

⁴⁹ '360 Patent, Doc. 55-3, p. 26, col. 26, ll. 55-57 (emphasis added).

least" means "[X] % or greater," the Court will focus on the stated percentages, *i.e.*, 98 wt % and 96 wt %, when construing theses terms. 50

ConAgra proposes that the terms "98 wt %" and "96 wt %" should incorporate a variance of +/- 5%, or a lower limit of 93% and 91% respectively, based on the prosecution history of the '172 patent. ConAgra argues that in testing particle size distribution of any flour, there is a variance due to a number of factors. Although the Patents' intrinsic record does not explicitly discuss this variance, ConAgra cites a declaration submitted by the inventor of the '172 Patent (the "Korolchuk Declaration") that contains a table allegedly stating that the granulation percentage varies by +/- 5%. Applying this percentage to the "at least 98 wt %" and the "at least 96 wt %" claim terms results in ConAgra's proposed constructions of 98 wt % or greater, +/- 5% variance or 93 wt % or greater and 96 wt % or greater, +/- 5% variance or 91 wt % or greater, respectively.

ConAgra also relies on the Federal Circuit's decision in *Cohesive Technologies, Inc. v. Waters Corporation*,⁵¹ in arguing that the Court should include a 5% variance when construing the terms. In *Cohesive*, the Federal Circuit construed the term "greater than about 30 <<mu>>m" to mean "(1) greater than 25.43 <<mu>>m or (2) greater than 23.044 <<mu>>m and of sufficiently large size to assure that the column is capable of attaining turbulence."⁵² The Federal Circuit found that the district court erred in finding that the term "greater than about 30 <<mu>>m" excluded 29.01 microns because that interpretation read the term "about" out of the

⁵⁰ In the parties' Joint Claim Construction Chart (Doc. 52-1), ADM proposed that the term "at least" should mean "at a minimum." ADM stated in its Memorandum on Claim Construction (Doc. 59) that it does not see a substantive difference between the words "at a minimum X%" and "X% or greater" and has adopted ConAgra's phrasing for this term.

⁵¹ 543 F.3d 1351 (Fed. Cir. 2008).

⁵² *Id.* at 1371.

claim.⁵³ The Federal Circuit stated that "[b]ecause the particles are not spherical, not uniformly shaped, and not precisely measurable, it is not surprising that the patent would claim a low-end threshold of 'about 30 <<mu>>,' rather than precisely '30 <<mu>>m.' "⁵⁴ The court based its construction off of two statements in the specification that it said supported the range "about" was intended to encompass in the patents in suit.⁵⁵ ConAgra argues that because the products produced in the Patents also contain irregular particles of varying sizes and the Patents' intrinsic record supports such variation, the Federal Circuit's holding in *Cohesive* should be applied to the terms at issue here to include a 5% variance.

The Court finds that neither the Patents' intrinsic record nor the *Cohesive* case supports the inclusion of a +/- 5% variance in the meaning of the terms. First, as ConAgra admits, nothing in the Patents' specifications mentions that the 98% and the 96% thresholds are subject to a 5% variance. Second, the Korolchuk Declaration also does not indicate that such variation exists. The Korolchuk Declaration was utilized by the '172 Patent's inventors in an office response to argue that the claimed invention in the '172 Patent was distinguishable from the prior art. Nothing in the Declaration states there is an industry wide 5% variation in particle size distribution. Furthermore, the specific table referenced in the Korolchuk Declaration refers to a whole wheat flour product produced from 1983 to 2009 and not the whole wheat flour product described in the Patents. Third, the claims themselves demonstrate that there is no +/- 5% variation because, if this was the case, "at least 98 wt %" would extend to 103 wt % under a 5% variation and "at least 96 wt %" would extend up to 101 wt %. And, finally, *Cohesive* is not

⁵³ *Id.* at 1368.

⁵⁴ *Id*.

⁵⁵ *Id.* at 1369.

applicable here because in that case, the Federal Circuit focused its construction on the meaning of the term "about" when construing the disputed terms, and the term "about" is not present in these terms. Accordingly, the Court construes the term "at least 98 wt %" to mean 98 wt % or greater and the term "at least 96 wt %" to mean 96 wt % or greater.

2. "At Least About 98%" and "At Least About 97 %"

Claims 1 and 26 of the '172 Patent require "a particle size distribution such that *at least about 98%* of particles by weight of the whole grain wheat flour are less than 212 micrometers."⁵⁶ In addition, claim 35 of the '172 Patent requires "*at least about 97%* of the particles by weight of the coarse fraction are less than 212 micrometers."⁵⁷ ConAgra proposes that the term "at least about 98%" mean *about 98% or greater*, +/- *5% variance* or *about 93% or greater*. ADM argues that the term should mean *97.5% or greater*. Similarly, ConAgra proposes that the term "at least about 97%" mean *about 97% or greater*, +/- *5% variance* or *about 92% or greater*. ADM proposes that the term mean *96.5% or greater*.

The primary difference between these terms and the "at least 98 wt %" and "at least 96 wt %" terms is the inclusion of the term "about." The Court, therefore, must construe the meaning of the term "about." "The word 'about' does not have a universal meaning in patent claims, and [its] meaning depends on the technological facts of the particular case."⁵⁸ "The use of the word 'about,' avoids a strict numerical boundary to the specified parameter. Its range

⁵⁶ '172 Patent, Doc. 55-2, pp. 26-27, col. 23, l. 22, col. 25, l. 58 (emphasis added).

⁵⁷ '172 Patent, Doc. 55-2, p.27, col. 26, l. 22 (emphasis added).

⁵⁸ *Cohesive*, 543 F.3d at 1368 (citations omitted).

must be interpreted in its technological and stylistic context."⁵⁹ The Court must thus "consider how the term . . . was used in the patent specification, the prosecution history, and other claims."⁶⁰ In determining how far beyond the claimed range the term "about" extends the claim, the Court must "focus . . . on the criticality of the [numerical limitation] to the invention."⁶¹

ADM argues that the claims, specification, and prosecution history for the '172 Patent "all indicate that 'about' allows for a narrow, defined expansion of the percentage."⁶² First, ADM argues that because the '172 Patent's claims include both ranges and precise percentages this suggests that the percentages in the disputed terms are intended to be precise rather than a range. In support of this argument, ADM relies on the Federal Circuit's decision in *Ortho-McNeil Pharmaceutical, Inc. v. Caraco Pharmaceutical Laboratories, Ltd.*,⁶³ where the Federal Circuit found that when the disputed term uses a standalone numerical limitation (*e.g.*, about 98%) and other claims use ranges (*e.g.*, about 2% to about 30%), "one of ordinary skill in the art would understand that the inventors intended a range when they claimed one and something more precise when they did not."⁶⁴

Second, ADM argues that comparison of the different claims suggests a specific range for the term "about." Claim 35 of the '172 Patent requires "at least about 97%" of the particles to be 212 microns or smaller, while claim 26 requires "at least about 98%" fit the same profile.

⁶⁰ *Id*.

- ⁶² Def. Memorandum on Claim Construction, Doc. 59, p. 16.
- ⁶³ 476 F.3d 1321 (Fed. Cir. 2007).

⁶⁴ *Id.* at 1327.

⁵⁹ Ortho-McNeil Pharm., Inc. v. Caraco Pharm. Labs., Ltd., 476 F.3d 1321, 1326 (Fed. Cir. 2007) (citations omitted).

⁶¹ *Cohesive Tech*, 543 F.3d at 1368.

ADM argues that because these claims differ by only 1%, then the "wiggle room" afforded by the term "about" must be less than 1%.

Third, ADM argues that the specification and the file history suggest that "about" permits little variation. The specification states that an objective of the invention is to create a whole wheat flour with the "desirable texture and appearance" of refined flour.⁶⁵ The specification states that to label flour as "refined flour," the FDA requires that "not less than 98%"⁶⁶ of the particles in the flour be smaller than 212 micrometers. According to ADM, the objective of the invention was to create a whole wheat flour product that would meet the FDA's requirements for refined flour. Because every example in the specification meets the 98% threshold, nothing in the intrinsic record suggests that the term "about" should be given a broad interpretation.

ADM's arguments are not persuasive. First, just because the '172 Patent contains claims with expansive ranges and standalone numerical limitations, the Court is not required to apply a standalone limitation to the claim. The *Ortho-McNeil* court ultimately upheld the broad construction of the term "ratio of about 1:5" to mean "1:3.6 to 1:7.1."⁶⁷ Second, ADM's comparison of the percentages in claims 35 and 26 of the '172 patent is incorrect. The particle size distribution in claim 35 of "at least about 97%" is for a "course fraction milled from whole grain wheat kernels"⁶⁸ while the particle size distribution of "at least about 98%" in claim 26 is for a "whole grain wheat flour."⁶⁹ These are two different things. Finally, the specification does

- ⁶⁶ '172 Patent, Doc. 55-2, p. 16, col. 4, ll. 50-56.
- ⁶⁷ Ortho-McNeil, 476 F.3d at 1328.
- ⁶⁸ '172 Patent, Doc. 55-2, p. 27, col. 26, ll. 19-20.
- ⁶⁹ '172 Patent, Doc. 55-2, p. 27, col. 25, l. 57.

⁶⁵ '172 Patent, Doc. 55-2, p. 15, col 2, ll. 57-67.

not state that the objective of the invention is to create a whole wheat flour product that would meet the FDA's standards for refined flour. Rather, the specification states that in current embodiments, the product would be "substantially similar" to refined flour.⁷⁰

Neither the intrinsic record nor the claims define or disavow the scope of the term "about." Furthermore, the term "about" is self-explanatory and thus needs no construction as a matter of law.⁷¹ Accordingly, the Court finds that the term "about" should be given its ordinary and customary meaning.

ConAgra also contends that because the terms "at least about 98%" and "at least about 97%" read on particle size, a +/- 5% variation should be included in the Court's construction of the terms. ConAgra relies extensively on the Federal Circuit's decision in *Cohesive Technologies* in support of this argument. But, the Federal Circuit's construction of the term "about" is distinguishable from this case because in *Cohesive*, the Court found that the specification contained relevant statements that supported the range that the term "about" was intended to encompass in the patents in suit. Here, nothing in the intrinsic evidence supports a finding that the term "about" included a 5% variation in particle size. Accordingly, the Court declines to include a 5% variance in the meaning of the terms. The Court finds that the terms "at least about 98%" and "at least about 97%" should be given their ordinary and customary meaning.

⁷⁰ *Id.* p. 19, col. 9, ll. 4-8; *see also id.* p. 21, col. 13, ll. 10-14.

⁷¹ *Phillips*, 415 F.3d at 1314 ("In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words."); *see also Jazz Pharm., Inc. v. Roxane Labs., Inc.*, 2012 WL 4103880, at *9 (D.N.J. Sept. 14, 2012) (finding that the term "about" requires no construction); *Freeman v. Gerber Prods. Co.*, 357 F. Supp. 2d 1290, 1299 (D. Kan. 2005) (finding that where the written description did not shed light on the term "substantially" that the parties' proposed constructions were not helpful and declining to construe the term).

3. "At Least 97%" and "At Least 97 Wt %"

Claim 35 of the '172 Patent requires "a measured ash value that is *at least 97%* of an expected ash value for the whole grain wheat kernels."⁷² Similarly, claim 14 of the '360 Patent requires "*at least 97 wt %* of the ash in the cleaned wheat kernels."⁷³ Because the parties no longer dispute the meaning of the term "at least," the Court construes the term "at least 97%" to mean *97% or greater* and the term "at least 97 wt %" to mean *97 wt % or greater*.

C. The Alleged Indefinite Terms

ADM contends that the terms "expected ash value" and "primarily," as used in the Patents, are indefinite. Under 35 U.S.C. § 112, a patent's specification must "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."⁷⁴ The purpose of this definiteness requirement "is to ensure that the claims delineate the scope of the invention using language that adequately notifies the public of the patentee's right to exclude."⁷⁵

The United States Supreme Court has held that "the statutory requirement of particularity and distinctness in claims is met only when [the claims] clearly distinguish what is claimed from what went before in the art and clearly circumscribe what is foreclosed from future enterprise."⁷⁶ The definiteness requirement, however, does not compel absolute clarity.⁷⁷ Only claims that are

⁷² '172 Patent, Doc. 55-2, p. 27, col. 26, ll. 30-31 (emphasis added).

⁷³ '360 Patent, Doc. 55-3, p. 26, col. 24, l. 30 (emphasis added).

⁷⁴ 35 U.S.C. § 112, ¶2.

⁷⁵ Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citing Honeywell Int'l, Inc. v. ITC, 341 F.3d 1332, 1338 (Fed. Cir. 2003)).

⁷⁶ United Carbon Co. v. Binney & Smith Co., 317 U.S. 228, 236 (1942).

⁷⁷ *Datamize*, 417 F.3d at 1347.

"not amenable to construction" or "insolubly ambiguous" are indefinite.⁷⁸ "Because claim construction frequently poses difficult questions over which reasonable minds may disagree, proof of indefiniteness must meet 'an exacting standard.' "⁷⁹ Therefore, " 'an accused infringer must . . . demonstrate by clear and convincing evidence that one of ordinary skill in the relevant art could not discern the boundaries of the claim based on the claim language, the specification, the prosecuting history, and the knowledge in the relevant art.' "⁸⁰ Furthermore, just because construction of a term is difficult does not mean the term is automatically rendered indefinite.⁸¹ "If the meaning of a claim term is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds."⁸² Along these lines, it is important to note that an issued patent is entitled to a statutory presumption of validity.⁸³ "By finding claims indefinite only if reasonable efforts at claim construction prove futile, we accord respect to the statutory presumption of patent validity.' "⁸⁴

When examining indefiniteness, general principles of claim construction apply.⁸⁵ Thus, the standards set forth by the Federal Circuit in *Phillips* should guide the Court's construction of

⁸⁵ *Id.* (citing *Oakley, Inc. v. Sunglass Hut Int'l*, 316 F.3d 1331, 1340-41 (Fed. Circ. 2003)).

⁷⁸ Id. (citing Novo Indus., L.P. v. Micro Molds Corp., 350 F.3d 1348, 1350 (Fed. Cir. 2003); Honeywell, Int'l, 341 F.3d at 1338; Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1375 (Fed. Cir. 2001)).

⁷⁹ *Id.* (quoting *Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 783 (Fed. Cir. 2010) (internal citations omitted)).

⁸⁰ *Id.*

⁸¹ *Datamize*, 417 F.3d at 1347.

⁸² *Exxon Research*, 265 F.3d at 1375.

⁸³ *Datamize*, 417 F.3d at 1347 (citing 35 U.S.C. § 282).

⁸⁴ *Id.* (quoting *Exxon Research*, 265 F.3d at 1375 (citation omitted)).

the terms. As prescribed by *Phillips*, the Court may look to intrinsic evidence, such as the patent's specification and prosecution file history, as well as extrinsic evidence. "What matters is for the court to attach the appropriate weight to be assigned to those sources in light of the statutes and policies that inform patent law."⁸⁶

1. "Expected Ash Value"

Claim 35 of the '172 Patent requires "a measured ash value that is at least 97% of an *expected ash value* for the whole grain wheat kernels."⁸⁷ ConAgra contends that the term "expected ash value" should be construed to mean *the mineral content in a wheat kernel determined prior to milling*, while ADM contends that this term is indefinite.

According to ConAgra, the '172 Patent defines "ash content of flour" as "the measurement of the minerals present in the flour."⁸⁸ It also states that "whole wheat flours will have a higher ash content than refined flours."⁸⁹ However, the Crop Quality Report published by U.S. Wheat Associates shows that there is no set ash value to determine whether flour is whole grain, in which the flour contains "substantially the same proportions of natural constituents, compared to a whole grain wheat kernel."⁹⁰ Thus, a flour's ash must be compared to an original kernel's ash to determine if "substantially the same proportions of natural constituents, compared

- ⁸⁷ '172 Patent, Doc. 55-2, p. 27, col. 26, ll. 30-31 (emphasis added).
- ⁸⁸ '172 Patent, Doc. 55-2, p. 15, col 7, ll. 15-16.
- ⁸⁹ '172 Patent, Doc. 55-2, p. 15, col. 7, ll. 20-22.
- ⁹⁰ '172 Patent, Doc. 55-2, p. 26, col. 23, ll. 19-21; Crop Quality Report, Doc. 55-10, p. 4.

⁸⁶ *Phillips*, 415 F.3d at 1324.

to a whole grain wheat kernel^{"91} from which it was milled have been retained. The ash content of the wheat kernel is the expected ash value.

ADM argues that the term is indefinite because the term lacks a technical meaning and is not defined in the specification. ADM asserts that ConAgra's proposed construction is improper because it fails to give meaning to the term "expected," because it lacks support in the specification, and because it is used inconsistently within the claims. ADM argues that for claims 1 and 35, the "expected ash value" relates to a wheat kernel, while for claim 32, it relates to "wheat flour."

In response, ConAgra argues that although the term does not appear in the specification, the term is present in the claim language and the prosecution history. ConAgra argues that the term is present in claim 1 when it states: "the whole grain wheat flour comprises substantially the same proportions of natural constituents, other than moisture, compared to a whole grain wheat kernel."⁹² And, the term is present in the prosecution history, as shown in one passage from an office action response:

The table on page 12 of Chigurupati I shows the ash content of the ultra-fine wheat flour. The *expected ash value* for intact wheat kernels of hard red spring wheat is 1.63. The ultra-fine wheat flour disclosed in Chigurupati I had a significant lower measured ash value (1.378) compared to the *expected ash value* of 1.63.⁹³

Another passage from the prosecution history states:

The ash content of wheat kernels was determined prior to milling and compared to the ash content of the whole grain flour produced by providing whole grain kernels to the mill. The ash content of the resulting fine while grain glour (1.45)

⁹¹ '172 Patent, Doc. 55-2, p. 26, col. 23, ll. 19-21.

⁹² '172 Patent, Doc. 55-2, p. 26, col. 23, ll. 19-21.

⁹³ '172 Prosecution History, Doc. 55-11, p. 4 (emphasis added).

compared with the ash of the starting kernel (1.49) confirmed substantial retention of ash (a relative measure of bran and germ) during milling (retaining about 97% of starting ash).⁹⁴

ConAgra contends that the cited passages from the prosecution history reinforce its position that the term "expected ash value" is not "insolubly ambiguous" or incapable of being construed.

The Court finds that ADM has not met the clear and convincing evidence standard required to show that the term "expected ash value" is indefinite. Although the term is not mentioned in the Patents' specifications, ConAgra has shown that the concept of "expected ash value" is present in the claim language itself and the prosecution history. The Court therefore construes the term to mean *the mineral content in a wheat kernel determined prior to milling*.

2. "Primarily"

The '360 patent uses the term "primarily" in the following limitations in claims 1, 14, and 27: "a coarse fraction including *primarily* bran and germ" and "a fine fraction including primarily endosperm."⁹⁵ ADM contends that the term is indefinite in this context, especially because it replaces the term "at least 97%" from claim 35 of the '172 patent. ConAgra contends that the term is not indefinite and that it should be given its ordinary and customary meaning.

ConAgra argues that the term "primarily" is well-understood to both those having ordinary skill in the art and laypersons reading the term in context. It admits that the patent does not explicitly define the term but points to passages in the specification that state that the present invention contains bran, germ, and endosperm. For example, one of these portions of the

⁹⁴ '172 Prosecution History, Doc. 55-12, p. 4.

⁹⁵ '360 Patent, Doc. 55-2, p. 26-27, col. 23, ll. 10-11, col. 24, ll. 25-26, col. 25, ll. 37-38 (emphasis added).

specification states: "in a current embodiment, the coarse fraction includes at least one of: bran and germ."⁹⁶

ADM argues that the term "primarily" is indefinite because it is a word of degree, and thus, the specification must provide some standard for measuring that degree. ADM cites the Federal Circuit's decision in *Exxon Research Engineering Co. v. United States*,⁹⁷ where the court found the term "to increase substantially" not to be indefinite because the specification included a specific numerical range and a specific method by which to measure whether a process met the range.⁹⁸ ADM argues that the '360 Patent's specification only provides the following guidance regarding the meaning of the term: "Whole grain wheat flour has increased nutritional value compared to refined wheat flour because it includes the entire wheat kernel, (i.e., includes bran, germ, and endosperm) rather than primarily just the endosperm⁹⁹ ADM asserts that because this reference does not provide a numerical range, it is not enough to understand the scope of ConAgra's invention.

ADM also asserts that even if the Court finds the term to be definite, the Court should construe "primarily" to mean "at least 97%." According to ADM, the term "primarily," as used in the quote from the specification above, represents the percentage of wheat flour that is endosperm, and one skilled in the art might interpret this to mean "at least 97% by weight," because it was used in the same context in the '172 patent.

- ⁹⁷ 265 F.3d 1371 (Fed. Cir. 2001).
- ⁹⁸ *Id.* at 1374.
- ⁹⁹ '360 Patent, Doc. 55-3, p. 15, col. 1, ll. 56-60.

⁹⁶ '360 Patent, Doc. 55-3, p. 17, col. 5, ll. 4-5.

The Court disagrees with ADM and finds that the term "primarily" is not indefinite. Neither the Federal Circuit nor this Court has ever found the term "primarily" to be indefinite. In fact, the Federal Circuit has held that it is error to impose an exact construction on terms of degree¹⁰⁰ and that terms like "substantially" or "generally" are "meaningful modifier[s] implying 'approximate,' rather than perfect."¹⁰¹ ADM has not met its burden to show by clear and convincing evidence that the term "primarily" is so ambiguous that it is incapable of construction. Therefore, the Court does not find the term indefinite.

The Court also rejects ADM's proposed alternative construction that the term be construed to mean "at least 97%." The Court is required to follow the canons of construction laid out by the Federal Circuit in *Phillips v. AWH Corp.*,¹⁰² and in that case, the Federal Circuit stated that where the ordinary meaning of a term is "readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly-understood words," a term should have its ordinary and customary meaning. Here, the meaning of the term "primarily" is readily apparent. Therefore, the Court finds that the term has its ordinary and customary meaning.

¹⁰⁰ See, e.g., Playtex Prods., Inc. v. Procter & Gamble Co., 400 F.3d 901, 907 (Fed. Cir. 2005) ("But the definition of 'substantially flattened surfaces' adopted by the district court introduces a numerical tolerance to the flatness of the gripping area surfaces of the claimed applicator [which] contradicts the recent precedent of this court, interpreting such terms of degree.") citing *Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352, 1361 (Fed. Cir. 2003) (refusing to impose a precise numeric constraint on the term "substantially uniform wall thickness"); Anchor Wall Sys. v. Rockwood Retaining Walls, Inc., 340 F.3d 1298, 1311 (Fed. Cir. 2003) (holding that "the phrase 'generally parallel' envisions some amount of deviation from exactly parallel,' and that "words of approximation, such as 'generally' and 'substantially,' are descriptive terms commonly used in patent claims to avoid strict numerical boundary to the specified parameter.").

¹⁰¹ Liquid Dynamics Corp. v. Vaughan Co., 355 F.3d 1361, 1368 (Fed. Cir. 2004).

¹⁰² 415 F.3d 1303 (Fed. Cir. 2005).

D. Remaining Disputed Terms

The parties dispute whether the remaining terms—"wheat kernel" and "whole grain wheat flour"—require construction by the Court. ConAgra asserts that these terms require no construction as a matter of law because they are readily understandable, straightforward, and are not the type of complex or overtly technical terms that would be confusing for a jury to understand when reading the Patents. ADM asserts that construction of these terms is necessary because they are terms of art in the wheat industry and that construction would help the jury to understand them.

The Federal Circuit has provided some guidance regarding when a claim term must be construed versus given its ordinary and customary meaning. In *Phillips*, the Federal Circuit stated that "[i]n some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of a claim term requires examination of terms that have a particular meaning in a field of art."¹⁰⁴ "Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks to 'those sources available to the public that show what a person of skill in the art would have understood the disputed claim language to mean." "¹⁰⁵ The Federal Circuit has cautioned, however, that claim construction "is not an obligatory exercise in redundancy" and is only intended to resolve

¹⁰⁵ *Id*.

¹⁰³ *Phillips*, 415 F.3d at 1314.

 $^{^{104}}$ *Id*.

"disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims."¹⁰⁶

1. "Wheat Kernel"

The term "wheat kernel" appears in claims 35 of the '172 Patent and claims 1-3, 14-16, 27, 28, 39, and 41 of the '360 Patent. Claim 1 of the '360 patent uses the term as follows: "[a] whole grain wheat flour produced from cleaned *wheat kernels* comprising:"¹⁰⁷ ConAgra asserts that this claim term should be given its ordinary and customary meaning, while ADM asserts that the Court should construe it to mean *the wheat grain, which includes the bran, the germ, and the endosperm*. ADM also proposes a diagram depicting where the bran, germ, and endosperm are found within a wheat kernel.¹⁰⁸

The Court construes the term "wheat kernel" to have its ordinary and customary meaning. The term is easily understood by laypersons and further construction of this term would not be helpful to a jury. The Court therefore declines to adopt ADM's proposed construction.

2. "Whole Grain Wheat Flour"

The term "whole grain wheat flour" is found in claims 1, 11, 13, 14, 15, 17, 19, 21, 22, 26, 29, 32, and 33 of the '172 Patent and claims 1-4, 14-17, and 27-29 of the '360 Patent. Claim 1 of the '362 Patent uses the term in the preamble of the claim as follows: "1. A *whole grain wheat flour* produced from cleaned wheat kernels comprising:"¹⁰⁹ ConAgra asserts that this

¹⁰⁶ United States Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1568 (Fed. Cir. 1997).

¹⁰⁷ '360 Patent, Doc. 55-3, p. 26, col. 23 ll. 8-9 (emphasis added).

¹⁰⁸ ADM asserts in its Memorandum on Claim Construction (Doc. 59) that its diagram is not essential to claim construction. Therefore, the Court disregards the diagram and declines to consider it in its construction of the term.

¹⁰⁹ '360 Patent, Doc. 55-3, p. 26, col. 23, ll. 8-9.

term should be given its ordinary and customary meaning, while ADM asserts that it should be construed to mean a flour made using the wheat kernel, that is, the bran, the germ and the endosperm, where the proportions of natural constituents in the wheat flour, other than moisture, remain unaltered as compared to the wheat kernel.

ADM argues that its construction adopts the definition of "whole grain wheat flour" as defined by FDA regulations and that the Patents' specifications support the use of this definition because they state "[i]n whole wheat flour (whole grain wheat flour), the proportions of natural constituents in the wheat, other than moisture, remain unaltered as compared to the wheat kernels."¹¹⁰ ADM also asserts that during the prosecution of the '172 Patent, the inventors repeatedly referenced the requirements of the FDA definition and thus the incorporation of the definition into the claim language is appropriate.

ConAgra contends that ADM's proposed language parrots and improperly narrows what is already stated in the claim language. ConAgra points to the language of claim 1 of the '172 Patent, which requires that the whole grain wheat flour comprise "substantially the same proportions of natural constituents, other than moisture, compared to a whole grain wheat kernel."¹¹¹ ConAgra argues that ADM's construction copies what is already stated in this limitation and thus is redundant. It also argues that ADM's construction improperly narrows the term to require that natural constituents "remain unaltered" without the use of the term "substantially."

The Court declines to construe the term "whole grain wheat flour." The term appears consistently throughout the Patents' claims and specification, is easily understood by laypersons,

¹¹⁰ '172 Patent, Doc. 55-2, p. 15, col. 1, ll. 51-53; '360 Patent, Doc. 55-2, p. 15, col. 1, ll. 50-64.

¹¹¹ '172 Patent, Doc. 55-2, p. 26, col. 23, ll. 19-21.

and thus requires no construction by the Court. Furthermore, as ConAgra asserts, ADM's construction is redundant and confusing. The claim language already requires that the whole grain wheat flour have "substantially the same proportions of natural constituents, other than moisture, compared to a whole grain wheat kernel"¹¹² and thus, the inclusion of this language in the term's definition is unnecessary. Accordingly, the Court gives the term "whole grain wheat flour" its ordinary and customary meaning.

IT IS ACCORDINGLY ORDERED that the disputed terms of the '172 Patent and the '360 Patent are construed as set forth in Order on this 5th day of June, 2013.

IT IS SO ORDERED.

Sici 7 Melgren

ERIC F. MELGREN UNITED STATES DISTRICT JUDGE

¹¹² '172 Patent, Doc. 55-2, p. 26, col. 23, l. 19-21; *see also* '360 Patent, Doc. 55-2, p. 26, col. 23, l. 15-16 ("substantially the same proportions of natural constituents, other than moisture, as the cleaned wheat kernels").