UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

FLEXSYS AMERICA LP,	)	CASE NO. 5:05CV156
	)	
PLAINTIFF,	)	JUDGE SARA LIOI
	)	
vs.	)	
	)	MEMORANDUM OPINION
	)	
	)	
KUMHO TIRE U.S.A., INC., et al.,	)	
	)	
	)	
DEFENDANTS.	)	

Plaintiff Flexsys America LP (Plaintiff or Flexsys) filed the above-captioned case on January 28, 2005, alleging infringement of several of its patents by defendants Kumho Tire USA, Inc., Kumho Tire Co., Inc., and Korea Kumho Petrochemical Co., Ltd. (Kumho), Sinorgchem Co., Shandong Sinorgchem International Chemical Industry Co., Ltd., Sinorgchem Co., Tai'an, Tongling Xinda Chemical Co., Ltd., Anhui Sinorgchem Technology Co., Ltd., and Jiangsu Sinorgchem Technology Co., Ltd. (Sinorgchem).[1] The patents-in-suit all relate to the processes used to make antidegradant additives for tires and other rubber products.

A court's first task in determining whether an accused device or process infringes a patent is to construe the claims to ascertain their proper scope. *Lockheed Martin Corp. v. Space Systems/Loral, Inc.*, 324 F.3d 1308 (Fed. Cir. 2003). Accordingly, the parties came before the Court on October 30, 2009 for a hearing on the proper

[1] Flexsys also named Sovereign Chemical Company as a defendant in this action. While Sovereighn remains a party to this litigation, it did not participate in the claim construction proceedings.

construction to be accorded the claims in the subject patents, commonly referred to as a *Markman* hearing.[2] *See Markman v. Westview Instruments*, 517 U.S. 370 (1996). At the Court's request, the parties submitted pre and post-hearing briefs on a variety of issues relating to claim construction. Upon consideration of the parties' briefs, argument, and the presentation of exhibits, the Court construes the disputed terms as set forth herein.

I. Background

For purposes of this litigation, Plaintiff is the holder of three patents: United States Patent No. 5,117,063 (the '063 patent), United States Patent No. 5,453,541 (the '541 patent), and United States Patent No. 5,608,111 (the '111 patent). The '541 patent, issued on a continuation-in-part application, is based on the '063 patent.[3] The '111 patent, in turn, is based on a continuation of the '541 patent. While the '541 patent was previously dismissed from this suit, the parties agree that it is relevant for purposes of claim construction.[4] (Doc. No. 226 at 3.)

The Process

The patents-in-suit set forth a new, environmentally-friendly method for making 4-aminodiphenylamine (4-ADPA) and its alkylated derivatives, namely alkylated p-phenylenediamines. These derivatives are used as anti-degradants in automobile tires. The patents set forth a three-step process: (1) the coupling of aniline and nitrobenzene to produce 4-ADPA intermediates; (2) hydrogenating the 4-ADPA intermediates into 4-

[2] Prior to the *Markman* hearing, the parties conducted a tutorial on October 29, 2009 for the benefit of the Court, wherein the chemistry behind the patents-in-suit was explained.

[3] The '063 patent issued on May 26, 1992, the '541 patent issued on September 26, 1995, and the '111 patent issued on March 4, 1997. Copies of the patents are contained in the parties' joint appendix. (*See* Doc. No. 213, Tab A, '063 patent; Tab B, '541 patent; Tab C, '111 patent).

[4] Another patent, United States Patent No. 6,140,538, was alleged in the complaint but was dismissed with the '541 patent.

ADPA; and (3) alkylating 4-ADPA to form the antidegradant additive, N-(1,2-dimethylbutyl)-N'-phenyl-p-phenylemediamine (6PPD).

The focus of the patents-in-suit is the coupling step. During this initial phase, aniline is combined directly with nitrobenzene in an environment containing a suitable base, solvent, and protic material—a substance, such as water, which is capable of donating a proton to the reaction. The '063 patent teaches that control of the protic material during this step is important. ('063 patent, col. 4, ll. 31-39.) Too little protic material will result in a nonselective reaction containing too much of the undesired product and too little of the desired product. In contrast, too much protic material will inhibit the reaction and result in low yield. (*Id.*)

The earliest patent, the '063 patent, represented a significant departure from the traditional method of making antidegradant additives. Prior to Plaintiff's invention, the conventional process for creating 6PPD involved coupling aniline with chlorinated nitrobenzene. By eliminating chlorine from the process, the '063 inventors were able to produce the desired 6PPD without the highly corrosive chlorinated waste by-products. The same chlorine-free process was carried through the '541 and '111 patents.

In 1997, Sinorgchem began working on its own process for producing 4-ADPA and 6PPD. Sinorgchem acknowledges that it was aware of the '063 and '111 patents, but claims that it understood that the process outlined in those pre-existing patents relied on the presence of protic material, i.e., water, in amounts less than 4% of the reaction mixture volume when aniline was the solvent. Because Sinorgchem's process always utilized water in amounts greater than 10%, Defendants believed that they could produce ADPA and 6PPD without infringing upon Plaintiff's patents.

Litigation History

The parties have already litigated this matter before the International Trade Commission (ITC) on two separate occasions. The first action, *In re Certain Rubber Antidegradants, Components Thereof, and Products Containing Same (Antidegradants I*), Inv. No. 337-TA-553, was filed in 2005. The key issue in that action was the construction to be given to the term "controlled amount" of protic material in the '063 and '111 patents when aniline is the solvent. The Administrative Law Judge (ALJ) rejected Plaintiff's definition of "controlled amount," which contained unspecified upper and lower limits designed to ensure the desired selectivity for 4-ADPA intermediates without inhibiting the reaction of nitrobenzene and aniline, in favor of Defendants' definition, which focused on the presence of no greater than 4% protic material.

The ITC rejected the ALJ's definition, adopted Flexsys's construction, and determined that "controlled amount" of protic material was "an amount up to that which inhibits the reaction of aniline with nitrobenzene." As discussed in detail below, the Federal Circuit reversed the ITC's decision, adopting, instead, the definition previously urged by Defendants and approved by the ALJ. *Sinorgchem v. ITC*, 511 F.3d 1132 (Fed. Cir. 2007).

Plaintiff filed a second action before the ITC on May 12, 2008. *In re Certain Rubber Antidegradants, Antidegradant Intermediates, and Products Containing Same (Antidegradants II))*, Inv. No. 337-TA-652. On September 15, 2008, the ALJ granted Defendants' motion for summary judgment and dismissed the action. The ITC affirmed the decision, and Flexsys did not appeal.

Plaintiff filed the present action on January 28, 2005. The matter has been stayed on multiple occasions in anticipation of rulings in the ITC actions. On April 24, 2009, the Court granted Plaintiff's motion to reopen the case. (Doc. No. 184.) Subsequently, the Court conducted a Case Management Conference and issued a Case Management Plan and Trial Order (CMPTO).

II. **Legal Standard**

Claim construction is a matter of law to be decided exclusively by the Court. *Markman v. Westview Instruments*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). "[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude." *Innova/Pure Water, Inc. v. Safari Water Filtration Sys.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004). Claim terms are "generally given their ordinary and customary meaning." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). "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, i.e., as of the effective date of the patent application." *Id*. at 1313. Absent an express intent to the contrary, a patentee is presumed to have intended the ordinary meaning of a claim term. *York Prods. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572 (Fed. Cir. 1996).

In determining the proper construction of a claim, a court begins with the intrinsic evidence of record, consisting of the claim language, the patent specification, and the prosecution history (if in evidence). *Phillips*, 415 F.3d at 1313. "Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim

language." *Vitronics*, 90 F.3d at 1582. "The appropriate starting point [. . .] is always with the language of the asserted claim itself." *Comark Communications v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed. Cir. 1998).

The claims also "must be read in view of the specification, of which they are a part." *Phillips*, 445 F.3d at 1315. The specification "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Vitronics*, 90 F.3d at 1582. By expressly defining terms in the specification, an inventor may "choose [. . .] to be his or her own lexicographer," thereby limiting the meaning of the disputed term to the definition provided in the specification. *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 990 (Fed. Cir. 1999). Although claims are interpreted in light of the specification, this "does not mean that everything expressed in the specification must be read into all the claims." *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 957 (Fed. Cir. 1983). For instance, limitations from a preferred embodiment described in the specification generally should not be read into the claim language. *See Comark*, 156 F.3d at 1187. However, it is a fundamental rule that "claims must be construed so as to be consistent with the specification." *Phillips*, 415 F.3d at 1316. Therefore, if the specification reveals an intentional disclaimer or disavowal of claim scope, the claims must be read consistent with that limitation. *Id*.

Courts also may consider the patent's prosecution history, if in evidence. The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution. *See Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995). The prosecution history

"constitutes a public record of the patentee's representations concerning the scope of and meaning of the claims, and competitors are entitled to rely on those representations when ascertaining the degree of lawful conduct." *Seachange Int'l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1369 (Fed. Cir. 2005) (quoting *Hockerson-Halberstadt, Inc. v. Avia Group Int'l, Inc.*, 222 F.3d 951, 957 (Fed. Cir. 2000)). The prosecution history may reveal "whether the patentee disclaimed or disavowed subject matter, narrowing the scope of the claim terms." *Id*. (internal citation omitted). "Where an applicant argues that a claim possesses a feature that the prior art does not possess in order to overcome a prior art rejection, the argument may serve to narrow the scope of otherwise broad claim language." *Id*. (citations omitted). Any such disclaimer must be clear and unambiguous. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323-25 (Fed. Cir. 2003). Courts must remain mindful, however, that "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Phillips*, 415 F.3d at 1317 (citations omitted).

In most circumstances, analysis of the intrinsic evidence alone will resolve claim construction disputes. *See Vitronics*, 90 F.3d at 1583. Extrinsic evidence may be considered, as it "'can shed light on the relevant art,' but is less significant than the intrinsic record in determining the 'legally operative meaning of disputed claim language.'" *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004) (quoting *Vanderlande Indus. Nederland BV v. ITC*, 366 F.3d 1311, 1318 (Fed. Cir. 2004)). Courts should not rely on extrinsic evidence in claim construction to contradict the meaning of claims discernable from examination of the claims, the written

description, and the prosecution history. *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583). However, the court may appropriately consult "trustworthy extrinsic evidence to ensure that the claim construction it is tending to from the patent file is not inconsistent with clearly expressed, plainly apposite, and widely held understandings in the pertinent technical field." *Id*. Extrinsic evidence "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317. All extrinsic evidence should be evaluated in light of the intrinsic evidence. *Id*. at 1319.

In construing claims, the Court determines whether or not a term requires construction. *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). The Court is not required to accept a construction of a term, even if the parties have stipulated to it, but instead may arrive at its own construction of claim terms, which may differ from the constructions proposed by the parties. *Pfizer, Inc. v. Teva Pharms, USA, Inc.*, 429 F.3d 1364, 1376 (Fed. Cir. 2005).

III. The Disputed Claim Terms and the Parties' Constructions

The parties seek construction of a number of claim terms and phrases, several of which recur throughout one or both of the patents-in-suit. The disputes center around four terms: "controlled amount of protic material," "the amount of protic material […] is controlled," "controlling the amount of said protic material […]," and "suitable solvent system." The parties agree that, where a disputed term appears in both the '063 and the '111 patents, it should be given the same construction.

A. *"Controlled Amount of Protic Material"*

The phrase "controlled amount of protic material" appears in claims 30 and 61 of the '063 patent, and claims 7, 11, and 29 of the '111 patent. Flexsys argues that "controlled amount of protic material" is "an amount of protic material up to that which inhibits the reaction of aniline with nitrobenzene and a minimum amount which is necessary to maintain the selectivity of the desired products." The term "inhibits," in turn, refers to "when the reaction of aniline with nitrobenzene is no longer significant."

Defendants urge the Court to adopt the definition approved by the Federal Circuit in *Sinorgchem*; namely, that a "controlled amount" of protic material is "an amount up to that which inhibits the reaction of aniline with nitrobenzene, e.g., up to about 4% H_20 based on the volume of the reaction mixture when aniline is utilized as the solvent." *Sinorgchem*, 511 F.3d at 1140. (Doc. No. 213, Claims Construction Chart at 1-2.)

B. *"The Amount of Protic Material […] is Controlled"*

The phrase "amount of protic material in step (b) is controlled" appears in claims 7 and 11 of the '111 patent. Plaintiff proposes a construction consistent with what it believes is the plain and ordinary meaning of these words; namely, "the amount of protic material is adjusted, controlled, managed, maintained or regulated." Defendants suggest that "is controlled" has the same meaning as "controlled amount" and should be given the same treatment as the latter term received from the Federal Circuit in *Sinorgchem*. (Claims Construction Chart at 2.)

C. *"Controlling the Amount of Said Protic Material […]"*

The phrase "controlling the amount of said protic material in step (a) or (b) to provide a selectivity of at least 0.97, wherein the selectivity is the molar ratio of 4-ADPA intermediates" appears in claim 23 of the '111 patent. Flexsys, again, advocates for what it views as the plain and ordinary meaning—"adjusting, controlling, managing, maintaining, or regulating how much protic material is present in the reaction of aniline (or substituted aniline derivatives) and nitrobenzene so that the reaction has a selectivity of at least 0.97, where selectivity is the molar ratio of 4-ADPA intermediates to undesired products […]." (Claims Construction Chart at 1-2.) Defendants argue that the phrase "controlling," too, has been used interchangeably in the patents with "controlled amount" and should receive the same treatment as that given to "controlled amount" by the Federal Circuit.[5] (Claims Construction Chart at 2-3.)

D. *"Suitable Solvent System"*

The phrase "suitable solvent system" appears in claims 30, 31, 39, 41, 43, 61, 62, 70, 72, and 74 of the '063 patent, and claims 7, 11, 23, and 29 of the '111 patent. Plaintiff proposes that the term refers to "a solvent or mixture of solvents." Defendants seek a more specific definition: "a solvent or mixture of solvents suitable for bringing aniline and nitrobenzene into reactive contact." (Claims Construction Chart at 1.)

[5] Defendants offer a separate definition for the second half of the phrase: "the ratio of the amount of 4-NODPA and 4-NDPA to the amount of phenazine and azobenzene obtained from the reaction of aniline and nitrobenzene." (*Id*. at 3.)

V. The Federal Circuit's Decision in *Sinorgchem*

This Court does not write on a clean slate. As noted above, the Federal Circuit has previously given construction to the central term at issue here: "controlled amount of protic material." In *Sinorgchem*, the court turned to a portion of the '063 patent specification, which provided:

> A "controlled amount" of protic material is an amount up to that which inhibits the reaction of aniline with nitrobenzene, e.g., up to about 4% H_2O based on the volume of the reaction mixture when aniline is utilized as the solvent.

('063 patent, col. 4, ll. 48-52.) The Federal Circuit found that by this language, the drafter had expressly defined the term "controlled amount" when aniline was the solvent. In so ruling, the court noted that the term "controlled amount" was set off by quotation marks—"often a strong indication that what follows is a definition." *Sinorgchem*, 511 F.3d at 1136. Further, the term was followed by "is," which signified that the patentee was acting as his own lexicographer. *Id*. The Federal Circuit concluded that "the drafter clearly, deliberately, and precisely defined the term 'controlled amount' of protic material […]." The court found telling the fact that "[e]lsewhere in the same paragraph, the specification again refers to the 4% limit." *Id.*

In reaching this conclusion, the court rejected the ITC's finding that language in the specification indicating that the amount of protic material will vary depending on the type of base, amount of base, and base cation used demonstrated that "e.g., up to about 4% H_2O" was simply an example and was not part of the express definition. According to the Federal Circuit, this vague language could not override the express definitional language. *Sinorgchem*, 511 F.3d at 1137. Ultimately, the court

concluded that "[w]hen aniline is used as the solvent, the express definition is neither ambiguous nor incomplete—the 'controlled amount' is 'up to about 4% H_2O based on the volume of the reaction mixture'—and we need look no further for its meaning." *Id*. at 1138. This determination was further bolstered by the fact that, elsewhere in the specification, a different limit of "about 8% water" was set forth for the "controlled amount" of protic material when DMSO is the solvent.[6] *Id.*

In a strongly worded dissent, Judge Newman criticized the ruling, noting that the majority's opinion disregarded examples in the patent wherein amounts of protic material in excess of 4% were utilized when aniline was the solvent. The dissent found that the decision to focus on the language contained in Example 3 caused the majority to ignore clear language located elsewhere in the specification and, in doing so, "exclude a major part of the invention." *Sinorgchem*, 511 F.3d at 1141. For their part, the majority considered the fact that other examples, such as Example 10, appeared to utilize amounts of protic material greater than 4% in different circumstances, noting that "[w]here, as here, multiple embodiments are disclosed, we have previously interpreted claims to exclude embodiments where those embodiments are inconsistent with unambiguous language in the patent's specification or prosecution history." *Id*. at 1138 (citing *Telemac Cellular Corp.*, 247 F.3d at 1326 (Fed. Cir. 2001)).

[6] Given the fact that aniline and DMSO were the only two solvents of six mentioned for which a numerical limit was provided, the court found that the "will vary" language in the specification clearly referred to the other four solvents for which a specific amount was not provided. *Id.* at 1138.

VI. Deference Given to the Federal Circuit's Decision in *Sinorgchem*

Before construing the aforementioned claim terms, the Court must determine what weight is to be afforded the Federal Circuit's decision in *Sinorgchem*. In its decision in *Texas Instruments v. Cypress Semiconductor Corp*., the Federal Circuit ruled that decisions of the ITC had no preclusive effect in subsequent actions in district court, 90 F.3d 1558, 1559 (Fed. Cir. 1996) ("[T]he district court can attribute whatever persuasive value to the prior ITC decision that it considers justified.")

In *Alloc v. Norman D. Lifton Co.*, 2007 U.S. Dist. LEXIS 52293 (S.D.N.Y. July 18, 2007), the court found that a different standard applies, however, to Federal Circuit decisions on appeal from the ITC. Relying upon the warning in *Texas Instruments* that "[d]istrict courts are not free to ignore holdings of [the Federal Circuit] that bear on cases before them," 90 F.3d at 1569, the court in *Alloc* determined that "a district court should afford Federal Circuit claim interpretation on appeal from the ITC a strong presumption of correctness, and deviate only where the party advancing an alternative interpretation provides compelling reasons to do so." 2007 U.S. Dist. LEXIS 52293, at *29.

According to *Alloc*, the conclusion that Federal Circuit decisions are entitled to a presumption of correctness was supported by "'the importance of uniformity' relied on by the Supreme Court in finding claim construction to be entirely an issue of law for the court to determine." *Id*. at *27 (citing *Markman*, 517 U.S. at 391). Uniformity in claim construction was in keeping with the laudable goals surrounding the creation of the Federal Circuit in the first place: "to ensure consistent ruling on patent scope, preventing a 'zone of uncertainty' which enterprise and experimentation may enter only

at the risk of infringement claims." *Id*. (quoting *United Carbon Co. v. Binney & Smith Co*., 317 U.S. 228, 236 (1942)).

Such a conclusion is further supported by the Federal Circuit's warning that subsequent Federal Circuit panels are "not free to ignore precedents set by prior panels of the court." *Texas Instruments*, 90 F.3d at 1569. Rather, "a subsequent panel will have powerful incentives not to deviate from that prior holding, short of thoroughly justified grounds." *Id*. As the court in *Alloc* found, "what is a suggestion to future Circuit panels must be understood as a command to the district courts. Given the greater authority and capacity of the Federal Circuit, a district court should accord prior rulings *more* deference than would a subsequent Circuit panel." 2007 U.S. Dist. LEXIS 52293, at *27 (emphasis in original.)

In light of the clear mandate from the Federal Circuit, this Court shall afford the Federal Circuit's claim interpretation a strong presumption of correctness, which may only be overcome by compelling reasons such as "evidence or arguments not presented to the Circuit panel or, in the rarest of cases, plain error on the face of the Federal Circuit opinion." *Id*. at *29. To defeat this presumption, Flexsys argues both that the Federal Circuit erred in its analysis and that certain arguments and evidence not before the Circuit would have, had they been offered, changed the outcome. The Court finds these arguments neither new nor persuasive. As such, it sees no reason to stray beyond the Federal Circuit's decision.

VII. Claim Construction

"Controlled Amount of Protic Material"

The Federal Circuit previously found that the parties agreed that the term "controlled amount" did not enjoy any well-accepted meaning in the field of chemistry. *Sinorgchem,* 511 F.3d at 1136. Plaintiff contends that the Circuit erred in reaching this conclusion, and offers new expert testimony to demonstrate the existence of an ordinary and well-accepted meaning.[7]

There is no Well-Accepted Meaning for "Controlled Amount"

The Court approaches Plaintiff's "new" evidence with a healthy dose of skepticism. Extrinsic evidence in the form of expert testimony is less persuasive than the patent and its prosecution history. *Phillips,* 415 F.3d at 1318. As the court in *Phillips* explained: "extrinsic evidence consisting of expert reports and testimony is generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence." *Id*. Thus, with this limitation in mind, the Court turns to Flexsys's new evidence.

Plaintiff's expert, Dr. Robert E. Maleczka, Jr., testified that those of ordinary skill in the art would understand the term "controlled amount" to refer to "an amount of something that is not necessarily quantified but that is present in a regulated

[7] Flexsys suggests that the Circuit erred in finding that it had agreed with Defendants that there was no well-accepted meaning for the term "controlled amount" shared by chemists, suggesting that "[a]t most, Flexsys failed to object to Respondents' proposed finding of fact pertaining to a different term—'controlled amount of protic material.'" (Doc. No. 255 at 19.) The Court finds this specious distinction to be without any meaningful difference. The only "controlled amount" that is relevant to the patents-in-issue is the "controlled amount of protic material." Moreover, Flexsys's expert, Dr. Crich, testified that one would have to "read the entire patent" in order to glean the meaning of the term "controlled amount." (Doc. No. 256, Ex. 19 at 3.) It is clear that Flexsys did not advocate for a finding of a well-accepted meaning before the Federal Circuit.

amount, regulated at the lower and upper limit, such that one will be able to achieve a desired result through that control." (*Markman* Hearing Transcript (TR) at 62.) Dr. Maleczka testified that his opinion that "controlled amount" has an accepted meaning was supported by a computer generated search he performed in relevant chemistry publications for the term "controlled amount." (TR at 106.)

The results of this search are less than impressive. While Dr. Maleczka indicated that his search scored 471 hits, the actual number of articles he reviewed was 19.[8] (TR at 110-11.) He further conceded that he found no dictionary definitions for the term "controlled amount," and that none of the articles put the term in quotes to suggest that the term held a particular meaning. (TR at 132, 162-63.) He also admitted that two of the articles he relied upon in forming his opinion were written in 2000 and another was published in 1998. (TR at 171, 173.) Of course, these articles, written years after the '063 patent issued, cannot shed light on the accepted meaning prior to 1991 when the '063 patent application was filed. Finally, Dr. Maleczka failed to show that any of the articles he reviewed treated the term "controlled amount" in the same manner in which he seeks to treat it, as a range with an upper and lower limit. In fact, one of the articles quantified the term as a fixed number, consistent with Defendants' use of the term. (TR at 169.)

Defendants' expert, Dr. Gregory Fu, performed the same computer search, and his results were telling. He testified that while he obtained "hits" for the words

[8] At the *Markman* Hearing, Defendants objected to the fact that Dr. Maleczka did not appear to be limiting his opinion to the 3 articles that he appended to his declaration, but had broadened his opinion to include these other 16 articles that he discovered in the course of his search. The Court has reviewed Dr. Maleczka's declaration (Doc. No. 228), and has concluded that the declaration was not based solely on the appended articles. As such, Dr. Maleczka was entitled to testify as to all of the articles that formed the basis of his opinion.

"controlled amount," the words did not appear together in the text. Instead, he would find "controlled" in one part of the document and "amount" in another portion of the text. (TR at 217.) Further, while Dr. Fu did testify that the term appeared five times in the Journal of Organic Chemist, he noted that the use of the term five times in the history of a journal that has been in publication for more than 55 years is hardly significant. (TR at 219-220.) The Court agrees, and finds that Plaintiff has failed to set forth sufficient evidence to establish a well-accepted meaning in the chemistry community for the term "controlled amount."

An Express Definition Trumps Any Well-Accepted Meaning

Of course, even if Flexsys had come forward with evidence demonstrating the existence of a common definition for "controlled amount," such a definition would have had to give way to any express definition set forth in the patents. "[A] claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in […] the specification […]." *CCS Fitness, Inc. v. Brunswick Corp*., 288 F.3d 1359, 1366 (Fed. Cir. 2002). *See Innova/Pure Water*, 381 F.3d at 1117 ("Because the inquiry into the meaning of claim terms is an objective one, a patentee who notifies the public that claim terms are to be limited beyond their ordinary meaning to one of skill in the art will be bound by that notification, even where it may have been unintended.")

Flexsys suggests, however, that the Federal Circuit "hedged" and "implicitly invit[ed]" Flexsys to offer evidence of a well-accepted meaning for the term "controlled amount" when it noted that:

> On appeal, the ITC relies on expert testimony that "a person of skill in the art would recognize the example of 4 % water to be limited to the conditions of room temperature and ambient pressure." Br. of Appellee at 22. We attribute no weight to that testimony because the experts did not identify any evidence that those skilled in the art would recognize that "controlled amount," or any term used in the specification, has an accepted meaning in the field of chemistry. Under such circumstances, testimony as to how one skilled in the art would interpret the language in the specification is entitled to little or no weight.

Sinorgchem, 511 F.3d at 1137, n.3. The observation that the Court could not begin to consider how one skilled in the art would treat the limitation of 4 [%] protic material in the absence of evidence of a well-accepted meaning for "controlled amount" cannot be equated to a finding that had such evidence been provided, the outcome would have been different. The Federal Circuit unequivocally found (and this Court agrees) that the drafter had acted as his own lexicographer by "clearly, deliberately[] and precisely" defining the term, *Id*. at 1136, and, as a result, the Court concluded that it "need look no further" than the express definition for the meaning of "controlled amount." *Id*. at 1138. Clearly, any evidence of a well-accepted meaning would not have changed this outcome.

The Federal Circuit Did Not Commit Plain Error in Finding an Express Definition for "Controlled Amount"

Plaintiff argues that the Federal Circuit erred in finding that the drafter included an express definition for "controlled amount." Specifically, Flexsys suggests that the Federal Circuit ignored its own precedents relating to the interpretation of the phrase "e.g." The Court disagrees.

The relevant portion of the specification containing the phrase "e.g." provides:

> Control of the amount of protic material present in the reaction is important. Generally, when the reaction is conducted in aniline, water

> present in the reaction in an amount greater than about 4% H_2O, (based on volume of the reaction mixture) inhibits the reaction of the aniline with the nitrobenzene to an extent where the reaction is no longer significant. Reducing the amount of water to below the 4% level causes the reaction to proceed in an acceptable manner. When tetramethylammonium hydroxide is utilized as a base with aniline as the solvent, as the amount of water is reduced further, e.g., down to about 0.5% based on the volume of the reaction mixture, the total amount of 4-nitrodiphenylamine and 4-nitrosodiphenylamine increases with some loss in selectivity so that more 2-nitrodiphenylamine is produced but still in minor amounts. Thus, the present reaction could be conducted under anhydrous conditions. *A "controlled amount" of protic material is an amount up to that which inhibits the reaction of aniline with nitrobenzene, e.g., up to about 4% H_2O based on the volume of the reaction mixture when aniline is utilized as the solvent.* The upper limit for the amount of protic material present in the reaction varies with the solvent. For example, when DMSO is utilized as the solvent and tetramethylammonium hydroxide is utilized as the base, the upper limit is about 8% H_2O based on the volume of the reaction mixture. In addition, the amount of protic material tolerated will vary with type of base, amount of base, and base cation, used in the various solvent systems. However, it is within the skill of one in the art, utilizing the teachings of the present invention, to determine the specific upper limit of the amount of protic material for a specific solvent, type and amount of base, base cation and the like. The minimum amount of protic material necessary to maintain selectivity of the desired products will also depend on the solvent, type and amount of base, base cation and the like, that is utilized and can also be determined by one skilled in the art.

('063 patent, col. 4, l. 31 - col. 5, 1. 4; emphasis added.) Plaintiff cites *Verizon Serv. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1305 (Fed. Cir. 2007), for the proposition that "Federal Circuit precedent recognizes that, "e.g.," when appearing in a definition, indicates that what follows is an ***example*** that illustrates the meaning of the defined term, but does not limit it scope." (Doc. No. 55 at 13, emphasis in original.) Plaintiff's reliance on *Verizon* is misplaced.

In *Verizon*, the court looked to a dictionary definition to discern the ordinary meaning of the term "destination." Therein, the dictionary defined the term as "a place which is set for the end of a journey or to which something is sent: place or point

aimed at [, e.g.,] when buying your plane tickets always buy through to your farthest [destination]." 503 F.3d at 1305 (quoting Webster's Third New International Dictionary 614 (2002)). In that case, the use of the term "e.g." came after the definition, and clearly was added to announce one possible use of the word "destination" in a sentence.[9]

In contrast, the drafter of the '063 patent used the phrase "e.g." as part of the definition of "controlled amount." Significantly, the phrase "e.g." occurred after the words "controlled amount" appeared in quotations followed by the word "is." The use of quotation marks followed by a definitional term such as "is" or "means" alerts the reader that what follows is a definition.[10] *See, e.g., Cultor Corp. v. A.E. Staley Mfg. Co.*, 224 F.3d 1328, 1330 (Fed. Cir. 2000); *Durel Corp. v. Osram Sylvania Inc*., 256 F.3d 1298, 1303 (Fed. Cir. 2001); *Abbott Laboratories v. Teva Pharmaceuticals USA, Inc.*, 2005 WL 1026746 (D. Del. Apr. 22, 2005).

The fact that Defendants' expert agreed that the definition could have been written without the "e.g." does not change this conclusion. (TR at 252-53.) As Dr. Fu observed, the drafter chose to uses the phrase "e.g." as part of the definition. (TR at 246.)

[9] It appears from the text of the *Verizon* decision that the "e.g." did not appear in the original text, but was added later by the court.

[10] It is worth noting that the drafter did offer two examples in the specification. Immediately after observing that "[t]he upper limit for the amount of protic material present in the reaction varies with the solvent," the drafter states "For example, when DMSO is utilized as the solvent and tetramethylammonium hydroxide is utilized as the base, the upper limit on the amount of protic material present in the reaction is about 8% H_2O based on the volume of the mixture." ('063 patent, col. 4, ll. 54-58.) Here, the drafter is showing an example of how the amount of protic water varies with the choice of solvent. Of course, consistent with the Federal Circuit's definition, the next example offered shows that when aniline is the solvent the amount of protic material is 4%. ('063 patent, col. 4, ll. 58-60.)

Having done so, the patentee is now bound by that limitation.[11] *See Innova/Pure Water, Inc.*, 381 F.3d at 1117.

The Existence of Examples Using > 4% Water When Aniline is the Solvent Does Not Justify Deviation from *Sinorgchem*

Flexsys suggests that its definition for "controlled amount" must be adopted by this Court because only its definition can encompass all of the examples. In support, Flexsys notes that Examples 9 and 10 in the '063 patent and Examples 13, 15, and 17 in the '111 patent all utilize water in amounts greater than 4% when aniline is the solvent.[12] This argument is not new, and was rejected by the Federal Circuit in *Sinorgchem*. While noting that Example 10 utilized more than 4% protic material, the Federal Circuit found that it was permissible "to exclude embodiments where those embodiments are inconsistent with unambiguous language in the patent's specifications or prosecution history." *Sinorgchem*, 511 F.3d at 1138 (citing *Telemac Cellular Corp.*, 247 F.3d at 1326). The court in *Sinorgchem* found such a course of action particularly appropriate in light of the fact that Example 10 was not even directed toward illustrating the amount of protic material to be used in the reaction but was, instead, offered to illustrate "the reaction of aniline, nitrobenzene and tetramethylammonium hydroxide

[11] Plaintiff also questions the Federal Circuit's determination that the "will vary" language in the specification "appears to refer to the four other solvents for which a specific percentage was not provided." *Sinorgchem*, 511 F.3d at 1138. Plaintiff argues that the Circuit's "novel interpretation" is inconsistent with a chemist's understanding that a change in one reaction condition can affect the optimal values and tolerances for other reactions and, therefore, the language must apply to all solvents, including aniline. (Doc No. 227 at 24-25.) The Court cannot accept Plaintiff's interpretation. The language immediately preceding the "will vary" language states unequivocally that when DMSO is the solvent, the amount of protic material is "about 8%." Earlier in the same paragraph, 4% is identified as the amount of protic material when aniline is the solvent. Clearly, the "will vary" language refers to those solvents for which the patentee has not specifically assigned a numeric amount.

[12] Example 9 uses between 4.3 % and 9.6% water, Example 10 uses 9.8%, Example 13 uses 10.8%, (TR at 95), and Examples 15 and 17 use 13.8% (TR at 10, 97.)

dehydrate under anaerobic conditions at 50 degrees C." *Id.* at 1139 (quoting '063 patent, col. 11, ll. 61-63).

A similar analysis may be applied to the other examples highlighted by Flexsys. None of these examples are directed to illustrating the effect of varying the amount of protic material on the yield of the 4-ADPA. The purpose of Example 7 is to demonstrate how the ratio of p-NDPA/4-NPDA can be controlled by the ratio of aniline/nitrobenzene. ('063 patent, col. 10, ll. 50-52.) Example 13 illustrates the continuous removal of water through distillation ('111 patent, col. 14, ll. 40-43), Example 15 speaks to how a variety of different phase transfer catalysts can be employed during the reaction ('111 patent, col. 15, ll. 55-56), and Example 17 shows under what conditions the amount of phenazine can be reduced ('111 patent, col. 17, ll. 12-15.)

The only examples that are designed to illustrate the impact of varying the amount of protic material are 3 and 8.[13] (TR at 39.). Example 3 clearly teaches that when aniline is the solvent, the controlled amount of protic material is about 4%, while Example 8 teaches that the controlled amount is about 8% when DMSO is utilized as a solvent.[14] *Sinorgchem*, 5111 F.3d at 1138. Further, Table 2, found in Example 3, demonstrates that as the amount of water in the reaction increases above a threshold of about 4%, the yield decreases "very significantly and, in fact, selectivity decreases." (TR

[13] Example 9 also addresses the amount of protic material to use in the reaction, but its focus is on the "effect that increasing the amount of base has on yields of 4-NDPA and p-NDPA […]." ('063 patent, col. 11, ll. 36-39; TR at 139.)

[14] Dr. Maleczka admitted that Example 3 is a "learning" example, as opposed to Examples 10, 13, 15, and 17, which he described as "preparative" examples. (TR at 78.) He further testified, however, that Example 3 does not teach that the amount of water must be limited to below 4%. (TR at 82.) Because this expert testimony contradicts the intrinsic evidence found in the patent, itself, it must be rejected *See Markman,* 52 F.3d 967, 981 (Fed. Cir.1995).

at 226; ‘063 patent, col. 9, ll. 32-44.) As the Federal Circuit found, the examples directed to the proper amount of protic material, the focal point of the analysis of the term “controlled amount” of protic material, reinforce the express definitional language setting the proper amount of protic material at about 4% when aniline is used as the solvent, and about 8% when DMSO is used. *Sinorgchem*, 511 F.3d at 1139.

Additional reasons counsel against relying upon the examples employing more than 4% of protic material to alter the express definition found by the Circuit. First, Examples 13, 15, and 17 appear only in the ‘111 patent and, therefore, were not part of the ‘063 prosecution history. “Additional examples included in the specification of the continuation-in-part application that led to the ‘lll patent cannot alter the meaning of the term as it appears in the [earlier] ‘063 patent.” *Sinorgchem*, 511 F.3d at 1139, n.5. *But see Microsoft Corp. v. Multi-Tech Sys.*, 357 F.3d 1340, 1349 (Fed. Cir. 2004).

Second, Examples 13, 15, and 17 utilize distillation, i.e., boiling off of water, during the reaction. (TR at 147.) While these examples may start with more than 4% protic material, the water is reduced over the course of the reaction in order to reach the optimal amount. (TR at 147-48.) Even Dr. Maleczka admitted that, with enough aniline, it would be possible to drive the water below 4%. (TR at 148-50.) The fact that these examples begin with more than 4%, therefore, does not constitute compelling

reasons to revisit the Federal Circuit's decision.[15]

Prosecution History Not Before the Federal Circuit Does not Cast Doubt on the Decision in *Sinorgchem*

When the '063 patent issued, Example 10 did not identify a specific amount of protic material. The Federal Circuit found it "significant" that no amount was stated, and noted that the amount could "only be determined by a complex calculation." *Sinorgchem*, 511 F.3d 1139. During the prosecution of the 541' patent, applicants submitted the calculation of the amount of water for Example 10—9.8%. At the *Markman* hearing in the present case, Defendants' expert testified that one of ordinary skill in the art could perform the calculation (TR 235), while Dr. Maleczka testified that the calculation was actually "pretty routine" (TR at 89).

This "new" evidence would not have changed the result. In finding Example 10 to be entitled to "little weight," *Sinorgchem*, 511 F.3d at 1139, the Circuit underscored the fact that Example 10 was not even directed to the importance of controlling the amount of protic material. *Id*. Moreover, the Circuit clearly knew that the amount of protic material in Example 10 exceeded 4% when it determined that it was appropriate to exclude this "preferred embodiment" from the interpretation of the term

[15] Flexsys challenges the Federal Circuit's observation that, with respect to Example 15, "Flexsys has not explained how the presence of 13.8% water at the beginning of the reaction is necessarily inconsistent with a 'controlled amount' of 4% during the operative part of the reaction." *Sinorgchem*, 511 F.3d at 1140, n.6. While the experts agree that "the operative part of the reaction" is that point after all the necessary reactants are present (TR at 94, 98, 101, 253), the '111 patent provides that the reaction takes place over a period of 4 hours and 5 minutes ('111 patent, col. 16, ll. 5-9). Thus, it is possible to reconcile the Circuit's observation in Footnote 6 with the testimony of the experts, leaving this Court with no definitive evidence that would support a contrary ruling.

"controlled amount" of protic material. *Id*. at 1138-1139. Having the specific figure of 9.8% would not have changed the Circuit's opinion that Example 10 was "merely one of twenty-one distinct examples set out in the two specifications," *Id*. at 1138, and that this particular example happened to fall outside of the claim definition. *See id*. at 1139.

Likewise subsequent "corrections" to Example 9 do not call into question the Circuit's decision. In 1995, four years after the '063 patent issued, Flexsys corrected Example 9 in the 'lll patent to reflect that the water content was not a constant amount during the reaction but actually ranged between 4.3% and 9.6%. (Doc. No. 227 at 17.) This "new evidence" adds little to the analysis. As previously noted, Example 9 is not restricted to demonstrating the effects of varying the amount of protic material, but also illustrates the "the effect that increasing the amount of the base has on yields of 4-NDPA and p-NDPA […]." ('063 patent, col. 11, ll. 36-39; TR at 139.) Because this example varies both the base and the protic material, its usefulness in testing the definitional language found by the Circuit in the '063 patent is limited. Moreover, corrections made years after the '063 patent issued cannot begin to shed light on the meaning of "controlled amount" the drafters intended at the time of drafting the '063 patent. *See Sinorgchem*, 511 F.3d at 1139, n.5.

Flexsys's Proposed Definition Would Fail for Indefiniteness

In response to the Court's inquiry regarding whether Plaintiff was permitted to argue both that the term "controlled amount of protic material" had an ordinary meaning to one skilled in the art and that the term had a specific meaning in the patent, Flexsys stated that its proffered definition merely "built upon" the accepted meaning set forth by its expert, Dr. Maleczka. (Doc. No. 255 at 11-12.) Whatever its

origin, the Court questions whether such a definition--an amount of protic material up to that which inhibits the reaction of aniline with nitrobenzene and a minimum amount which is necessary to maintain the selectivity of the desired products—would be patentable.

"A patent holder should know what he owns, and the public should know what he does not. For this reasons, the patent laws require inventors to describe their work in 'full, clear, concise, and exact terms,' 35 U.S.C. § 112, as part of the delicate balance the law attempts to maintain between inventors, who rely on the promise of the law to bring the invention forth, and the public, which should be encouraged to pursue innovations, creations, and new ideas beyond the inventor's exclusive rights." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002).

Paragraph 2 of 35 U.S.C. § 112 requires that the specification of a patent "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." Because claims define the limits of a patentee's right to exclude, "the patent statute requires that the scope of the claims be sufficiently definite to inform the public of the bounds of the protected invention, i.e., what subject matter is covered by the exclusive rights of the patent. Otherwise, competitors cannot avoid infringement, defeating the public notice function of patent claims." *Halliburton Energy Services, Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008) (citing *Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996)). "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." *United Carbide Co*., 317 U.S. at 236.

Dr. Maleczka testified that while the patents-in-suit do not provide an enumeration of the level of selectivity that is desired, the patents-in-suit give "some sense […] of what's achievable in terms of selectivity." (TR at 187.) He admitted, however, that at the point that selectivity is no longer maintained at an acceptable fashion will vary from chemist to chemist, and situation to situation (TR at 191), and "is going to be dependent upon the chemistry and, again, in part dependent on the other considerations as to why you're doing this particular reaction." (TR at 188.) As for the definition of "inhibits," which Plaintiff defines as "when the reaction of aniline with nitrobenzene is no longer significant," Dr. Maleczka admitted that the point in which the reaction is "no longer significant" is "a bit of a judgment call." (TR. at 192.) He also noted that it, too, could vary from chemist to chemist, but added that "the inventors do give you some sense of where they're making that call." (*Id*.)

Plaintiff's "Goldilocks" definition of "controlled amount of protic material"--not too little and not too much, but just the right amount—would render the patents indefinite. Here, there is no defined standard for judging whether selectivity has been maintained and at what point the reaction of aniline with nitrobenzene is no longer significant. Rather, the claim language would be entirely dependent on the "unrestrained, subjective opinion of a particular individual purportedly practicing the invention," rendering the patents indefinite. *See, e.g., Datamize, LLC v. Plumtree Software, Inc*., 417 F.3d 1342, 1350 (Fed. Cir. 2005) (patent was indefinite where the term "aesthetically pleasing" depended upon an undefined standard); *Halliburton Energy Services, Inc.*, 514

F.3d at 1250 (claim term "fragile gel" rendered a patent indefinite due to the ambiguity in interpreting that phrase).

For the reasons set forth above, the Court defines the term "controlled amount of protic material" as follows: "an amount up to that which inhibits the reaction of aniline with nitrobenzene, e.g., up to about 4% H_20 based on the volume of the reaction mixture when aniline is utilized as the solvent."

Controlling the Amount of Said Protic Material
The Amount of Protic Material in Step(b) is Controlled

The parties also seek construction of two similar terms: "controlling the amount of said protic material in step (a) or (b) to provide a selectivity of at least 0.97, wherein the selectivity is the molar ratio of 4-ADPA intermediates" and "the amount of protic material in step (b) is controlled." The Court agrees with Defendants that these terms have been used interchangeably with "controlled amount of protic material," and are entitled to a similar construction.

The Federal Circuit gives like treatment to terms that are used within the specifications interchangeably. In *Terhani v. Hamilton Med. Inc.*, the court applied the same interpretation to the terms "indicative of" and "representing" because "the intrinsic evidence indicates that the patentee meant for these two terms to be interchangeable and to carry the same meaning within the claims." 331 F.3d 1355, 1361 (Fed. Cir. 2003). Similarly, in *Tate Access Floors, Inc v. Maxcess Techs.*, the court construed the terms "inner layer" and "inner body portion" in the same manner because "they are used interchangeably in the specification." 222 F.3d 958, 968 (Fed. Cir. 2000).

Turning to the specifications for the patents-in-suit, it is clear that Flexsys never drew a distinction between the terms "controlled amount," "controlling the amount," and "is controlled." For example, the specifications provide: "*[c]ontrol* of the amount of protic material present in the reaction is important" ('065 patent, col. 4, ll. 30-32; '111 patent, col. 5. 11. 27-28 and col. 10, ll. 30-31); "[a] '*controlled amount'* of protic material is an amount up to that which inhibits the reaction […]" ('065 patent, col. 4, ll. 48-52; '111 patent, col. 5, ll. 43-47); "[t]he present invention relates to methods for preparing 4-aminodiphenylamine […] wherein the amount of protic material, e.g., *is controlled*, to produce a mixture […]" ('065 patent, col. 4, ll. 48-52; '111 patent, col. 1, ll. 15-22); and "the continuous distillation of protic material is the currently preferred method for *controlling* the amount of protic material […]."[16] ('111 patent, col. 6, ll. 40-44) (emphasis added).

As for the claims, it is clear in claim 7 of the '111 patent that the phrase "the amount of protic material in step (b) is controlled" is referring to the "controlled amount of protic material" that is identified at column 21, lines 4-5, and has been previously defined by the Court. The same analysis applies to claim 11. As for claim 23, "controlling the amount of said protic material in step (a) or (b) to provide a selectivity of at least 0.97, wherein the selectivity is the molar ratio of 4-ADPA intermediates" also corresponds to the "controlled amount" of protic material that is critical to the reaction and has previously been defined.

[16] In addition, Dr. Maleczka testified that the terms "controlled" and "controlling" were used in an interrelated way. (TR at 179.)

Thus, the Court construes "the amount of protic material in step (b) is controlled" to mean "the amount is controlled so that it is an amount up to that which inhibits the reaction of aniline with nitrobenzene, e.g., up to about 4% H_2O based on the volume of the reaction mixture when aniline is utilized as the solvent." The phrase "controlling the amount of protic material" in claim 23 also has the same meaning as "is controlled" and "controlled amount." As for the second half of the term, "to provide a selectivity of at least 0.97, wherein the selectivity is the molar ratio of 4-ADPA intermediates to undesired products," the Court finds that a person of ordinary skill in the art is readily familiar with the formula set forth in this phrase and, therefore, no construction is necessary.

Suitable Solvent System or Solvent System

The final term for which the parties have sought construction is "suitable solvent system" or "solvent system." The parties offer similar interpretations for this phrase, suggesting that there is substantial agreement as to the construction of this term. Nonetheless, there is some dispute. While both sides agree that a "suitable solvent system" or a "solvent system" is a "solvent or mixture of solvents," Defendants wish to add to the definition the language "suitable for bringing aniline and nitrobenzene into reactive contact."

The Court agrees with Plaintiff that this additional language is superfluous. Indeed, to adopt Defendants' definition *in toto* would be redundant, as certain claims, such as claims 30 and 61 of the '065 patent, and claims 7,11, 23, and 29 of the '111 patent, already discuss bringing aniline or substituted aniline derivatives and nitrobenzene into reactive conduct in the same sentence in which the term "suitable

solvent system" appears. Therefore, the Court finds that the proper construction of "suitable solvent system" or "solvent system" is "a solvent or mixture of solvents."

VIII. Motion to Appoint a Technical Advisor

Plaintiff has also filed a motion to appoint a technical advisor. (Doc. No. 208.) Defendants oppose the motion (Doc. No. 218), and Plaintiff has replied (Doc. No. 222). The Court deferred ruling on the motion until after the *Markman* hearing and is now prepared to rule.

Flexsys maintains that a technical adviser versed in chemistry could assist the Court, especially at the claim construction stage. In support of its position, Flexsys notes that claim construction has been hotly contested both in the first action before the ITC and in the present litigation.

Defendants oppose the motion, stating that an advisor would be unnecessary because the tutorial [was] adequate to educate the Court on the claim construction issues. Defendants also stress that Plaintiff's motion comes too late, and that it would take so long to appoint an appropriate neutral advisor that the dates and deadlines in the Court's CMPTO might be jeopardized.

Because it is the "gatekeeper" of the trial in determining what scientific evidence is admissible, "the district court must have the authority to appoint a technical advisor in such instances so that the court can better understand scientific and technical evidence in order to properly discharge its gatekeeper role of determining the admissibility of such evidence." *TechSearch LLC v. Intel Corp*., 286 F.3d 1360, 1377 (Fed. Cir. 2002). District courts must, however, exercise this authority "sparingly and then only in exceptionally technically complicated cases." *Id*. at 1378 (citing *Ass'n of*

Mexican-Am. Educators v. Cal., 231 F.3d 572, 590 (9th Cir. 2000)). The decision of whether to appoint a technical advisor rests within the sound discretion of the district court. *See TechSearch LLC*, 286 F.3d at 1379.

The Court finds that this is not the "exceptionally technically complicated" case that warrants the appointment of a technical advisor. The thorough and professional tutorial that the parties presented prior to the *Markman* hearing more than adequately educated the Court on the chemistry that is at the core this litigation. Moreover, the parties' exceptional briefing has further contributed to the Court's understanding of how the chemistry relates to the issues present in this matter. As such, the Court **DENIES** Plaintiff's motion to appoint a technical advisor. For the same reasons, the Court also **DENIES** Plaintiff's alternative motion to appoint an independent expert witness under Rule 706 of the Federal Rules of Evidence. *See Tangwall v. Robb*, 2003 U.S. Dist. LEXIS 27128, at *8 (E.D. Mich. Dec. 23, 2003) ("The determination to appoint an expert under [Rule 706] rests solely in the Court's discretion and is to be aided by such factors as the complexity of the matters to be determined and the fact-finder's need for a neutral, expert view.")

IT IS SO ORDERED.

Dated: February 8, 2010

HONORABLE SARA LIOI
UNITED STATES DISTRICT JUDGE