IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

GE HEALTHCARE UK LIMITED, Plaintiff/Counterdefendant, v. BECKMAN COULTER, INC. AND BECKMAN COULTER GENOMICS, INC., Defendants/Counterclaimants.	§ § § § § § § § § §	C.A. No. 09-974-RK **JURY TRIAL DEMANDED**

GE'S RESPONSIVE CLAIM CONSTRUCTION BRIEF

Frederick L. Cottrell, III (#2555)
Anne Shea Gaza (#4093)
Stephen M. Ferguson (#5167)
Richards, Layton & Finger
One Rodney Square
920 N. King Street
Wilmington, DE 19801
(302) 651-7700
cottrell@rlf.com
gaza@rlf.com
ferguson@rlf.com
Attorneys for Plaintiff

OF COUNSEL:
Nicholas Groombridge
WEIL, GOTSHAL & MANGES LLP
767 Fifth Avenue
New York, NY 10153-0119
(212) 310-8000

David J. Ball, Jr.
Azra Hadzimehmedovic
Rachelle H. Thompson
Annaka Nava
WEIL, GOTSHAL & MANGES LLP
1300 Eye Street, NW, Suite 900
Washington, DC 20005
(202) 682-7000

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I.

INTRODUCTION

The parties agree that the objective of claim construction should be "'to clarify and when necessary to explain what the patentee covered by the claims.'" Beckman's Br. at 4 (quoting *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997)). GE's proposed constructions do that, by explaining how the claim terms would have been understood by a person of ordinary skill in the art in 1990, and providing that explanation in nontechnical language. Rather than explaining the claims, Beckman repeatedly attempts to narrow them in an apparent attempt to improve its position on infringement. But Beckman's proposals are based on embodiments and examples of the claimed invention in the specification, not the invention as a whole as stated in the claims. It is improper to import limitations into the claims based on such examples. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (*en banc*).

II.

ARGUMENT

A. "Beads Which Do Not Specifically Bind The Nucleic Acid" ('231 Patent, Claim 1; '946 Patent, Claim 1)

Term	GE's Construction	Beckman's Construction
"beads which do not specifically bind the nucleic acid"	Beads that do not attach to the nucleic acid in a way that is governed by the particular structure of that particular nucleic acid	Particles that are inert or do not have an affinity for nucleic acids

This claim term is based on the phrase "specific binding," which is well-understood and extensively used by scientists, but which the non-scientists on the jury

may have never even heard. GE provides a non-technical explanation of the claim language that the jury can understand – the "beads which do not specifically bind the nucleic acid" are beads that do not attach to the nucleic acid in a way that is governed by the particular structure of that particular nucleic acid.

The record does not support Beckman's proposed construction that the beads must be "inert or do not have an affinity for nucleic acids." Beckman's construction is unnecessarily complicated and ignores statements in the intrinsic and extrinsic evidence showing that such features are not required.

1. The Evidence Shows That GE Is Correct About The Ordinary Meaning Of "Specific" Binding And The Patents Use This Ordinary Meaning

A person of ordinary skill in the art in 1990 would have understood "specific" binding refers to binding or attachment governed by the particular structure of the particular substances being bound. Kool Decl. ¶¶ 32, 44 (D.I. 76). GE's expert Dr. Kool explains this concept in detail and provides several examples.[1] *Id.* ¶¶ 32-44. Included in the examples are the very same Vorpahl and Hawkins patents which Beckman has told GE it will use to try to prove invalidity and noninfringement, and which define "specific" and "non-specific" binding in the same fashion. *Id.*; *see* GE's Br. at 6 (D.I. 75).

Beckman's brief asserts that GE's explanation of "specific" is ambiguous, because GE uses words like "attach" and "structure." Beckman's Br. at 10-11 (D.I. 73). These layman's terms are not ambiguous. Dr. Kool has explained that a person of

[1] Such expert testimony is useful to provide context and explain scientific concepts. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308-09 (Fed. Cir. 1999).

ordinary skill would have understood "attach" and "bind" to be synonymous in this context. Kool Decl. ¶ 44. As for "structure," that is the same word used in the Vorpahl patent, which defines non-specific binding as "relatively independent of specific surface *structures*." GE's Exh. 3 (D.I. 77), Vorpahl Patent at 14:15-33 (emphasis added).[2]

Beckman also appears to question whether the '231 and '946 Patents use "specific" binding with its ordinary meaning, on the theory that the patents allegedly do not "discuss[ ] the structure of a nucleic acid." Beckman's Br. at 11. But Beckman ignores the Patent Examiner's "Reasons For Allowance" of the '231 Patent. The Examiner listed two types of "specific" binding – antibody/antigen and covalent bonding. These are the same examples listed in Vorpahl. *See* GE's Exh. 3, Vorpahl Patent at 14:15-33; GE's Exh. 5, Notice Of Allowance at 2. This shows the Examiner understood the '231 and '946 Patents to use "specific" binding in its ordinary sense.[3]

Beckman incorrectly asserts that GE "expressly excluded during prosecution" beads that "adsorb or covalently bind nucleic acids." Beckman's Br. at 8, 10. The passage Beckman relies on concludes: "In contrast, the method of the present invention involves the use of magnetic beads which do not adsorb the biopolymer, *at least not while the polymer remains in solution*." Beckman's Exh. 4 at 6 (D.I. 74)

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[2] Beckman also takes issue with a small clarifying change to GE's construction.

- Previous phrasing: "… attach … in a way that is not governed …."
- Revised phrasing: "… do not attach … in a way that is governed …."

The claim term refers to beads that "do not specifically bind," and thus a construction using the words "do not" is clearer and more closely wedded to the claim language.

[3] The patents did not expressly use the word "structure," *see* GE's Exh. 1, '231 Patent at 3:27-32; GE's Br. at 6-7, but the patents were written for persons of ordinary skill in the art who knew what "specific" binding means, so they did not need to define it expressly.

(emphasis added). That says nothing about what happens after the nucleic acid is precipitated out of solution, as is recited in the claims. *See* GE's Exh. 1, '231 Patent at 12:25-28.

2. Beckman Ignores The Evidence Showing That The Claims Do Not Require The Complete Absence Of Binding

Beckman's proposed construction – "particles that are inert or do not have an affinity for nucleic acids" – uses words that imply the complete absence of binding. Kool Decl. ¶¶ 46, 51.[4] Beckman appears to add this requirement to the claims to support its noninfringement argument.[5] As background, the Hawkins patent, which Beckman asserts describes and covers the method used in Beckman's accused products and services, repeatedly states that Hawkins uses non-specific binding. GE's Exh. 4, Hawkins Patent at Abstract, 2:24-28, 2:36-37, 2:41-44, 3:16-18 & *passim*; *see also* Beckman's Am. Counterclaim ¶¶ 8 & 19 (D.I. 54) (asserting Beckman's accused SPRI products and services are practiced under a license to the Hawkins patent).

Rather than having to explain why Beckman believes its binding is specific even though Hawkins says that it is not, Beckman attempts to construe the claims to require no binding at all. But, as discussed below, Beckman ignores all of the intrinsic

[4] Beckman confirms its intent to equate inertness with lack of any binding at all on page 12 of its brief, which asserts that the beads are "inert (not chemically reactive)."

[5] It is appropriate for the Court to be informed of the context underlying claim construction disputes. "While a trial court should certainly not prejudge the ultimate infringement analysis by construing claims with an aim to include or exclude an accused product or process, knowledge of that product or process provides meaningful context for the first step of the infringement analysis, claim construction." *Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1326-27 (Fed. Cir. 2006).

and extrinsic evidence showing that the '231 and '946 Patents do cover a type of binding between the beads and precipitated nucleic acids, namely non-specific binding.

The claims contradict Beckman's argument. Claim construction begins with the claim language itself. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). Claim 1 of the '946 Patent recites: "precipitating the nucleic acid out of the starting solution in the presence of the suspended magnetically attractable beads whereby a nucleic acid precipitate becomes non-specifically associated with the beads." GE's Exh. 2, '946 Patent at 12:19-40. Non-specific association can include chemical interactions or binding. Kool Decl. ¶¶ 65-67. Thus, Beckman cannot be correct to assert that the patent claims require no binding at all.

The specification contradicts Beckman's argument. The specification, like the claims, does not say the beads "do not bind"; it says that the beads do not "specifically" bind. *See* GE's Br. at 7-8; GE's Exh. 1, '231 Patent at Title, Abstract, 2:47, 3:27-35.[6] As GE has explained, this is an important difference, and the word "specifically" should not be read out of the claims. GE's Br. at 7-9; *see Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) ("[C]laims are interpreted with an eye toward giving effect to all terms in the claim."). It is the lack of *specific* binding, not the absence of any binding at all, that distinguishes the '231 and '946 Patents from the prior art. Thus, the block quote on page 7 of Beckman's brief supports GE, not Beckman. *See also* GE's Br. at 6-7 (discussing same block quote). Moreover, the specification includes express statements showing that inert beads (or beads that do not bind) are *not* required.

[6] Moreover, when the patents want to say there is no association at all, they do so expressly. *See* GE's Br. at 8; GE's Exh. 1, '231 Patent at 3:32-38.

For example, while the specification says one example of magnetic beads that might be used are "completely encapsulated in inert polymer," the specification also teaches that "the organic polymer may be omitted." GE's Exh. 1, '231 Patent at 2:58, 3:2-5.

Even the evidence Beckman cites does not support its extreme position. Beckman repeatedly asserts that the specification teaches how to "reduce" any "affinity for nucleic acids." Beckman's Br. at 6-7. But to "reduce" binding does not require completely eliminating it.[7] Kool Decl. ¶¶ 50, 52.

The prosecution history contradicts Beckman's arguments. Beckman argues that the applicant disavowed non-inert beads during prosecution, but Beckman fails to address the relevant law, and its argument is contrary to the facts. As to the law, a disavowal of claim scope during prosecution must be clear and unmistakable. *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1306 (Fed. Cir. 2007); *Purdue Pharma L.P. v. Endo Pharms., Inc.*, 438 F.3d 1123, 1136 (Fed. Cir. 2006). As to the facts, no such clear and unmistakable disavowal has happened here.

Beckman relies on a selective, out-of-context quotation from the October 20, 1993 Response to Office Action, in which the applicant discussed "inert non-binding magnetic particles." Beckman ignores the applicant's statement, in the same submission to the Patent Office, stressing that "the method of the present invention" includes "the separate step of precipitating the polymer out of solution, whereby it becomes non-specifically associated with the beads." GE's Exh. 8, Response To Office Action at 6 (Oct. 20, 1993). This statement that the invention includes non-specific association,

[7] Also, the specification does not use the word "affinity," and adding "affinity" to the claims will not make them more understandable to the jury.

which can include binding, Kool Decl. ¶¶ 65-67, shows the applicant did not intend to require the beads to be incapable of binding. Thus, this Response to Office Action is far from the clear and unmistakable statement required for disavowal of claim scope. Beckman also ignores the later prosecution history, including the statement of Reasons For Allowance, showing that both the '231 Patent Examiner and the Reexamination Patent Examiner understood that it is the absence of specific binding, not the total absence of any binding at all, that is required by this claim term. *See* GE's Br. at 8 n.4.

The extrinsic evidence contradicts Beckman's arguments.[8] Beckman attempts to rely on documents describing an "FMP" commercial embodiment of the '231 and '946 Patents. First, such commercial embodiments are examples that cannot be used to narrow the claims. *See Smithkline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1339-40 (Fed. Cir. 2005).[9] Second, the block quote on page 10 of Beckman's brief is not a quote from a single document; rather it provides two sentences again taken out of context from two documents describing FMP. Beckman ignores other relevant statements in both documents. The first document states that FMP beads "have been specifically designed to ensure minimum" – not zero – "non-specific binding." Beckman's Exh. 8 at 4. The second document repeats this, and also states that the FMP beads are pretreated to "reduce" – not eliminate – "permanent binding." Beckman's Exh.

[8] It is not necessary to consider the extrinsic evidence because it cannot be used to contradict to the intrinsic record. Beckman's Br. at 9; *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996).

[9] The prosecution history describes the FMP embodiment as "essentially the same" as Example 7 in the specification, not the claimed invention as a whole. Beckman's Exh. 7 at 3. The FMP embodiment is only an example of the claimed invention.

9 at 10. Considered as a whole, this extrinsic evidence would not require the complete absence of binding even with regard to the FMP commercial embodiment, much less the claimed invention. And Beckman wholly ignores other extrinsic evidence showing that non-specific binding is actual binding. *See* GE's Br. at 8.[10]

B. "Becomes Aggregated With And Entraps The Beads" ('231 Patent, Claim 1)

Term	GE's Construction	Beckman's Construction
"becomes aggregated with and entraps the beads"	Clusters with and traps the beads *GE believes this term need not be construed, but should the Court determine that construction is required, GE proposes the construction stated above.*	Clusters together and surrounds the beads such that the beads are passively enmeshed in the precipitate

This claim term is part of the phrase in claim 1 of the '231 Patent, stating: "whereby a nucleic acid precipitate becomes aggregated with and entraps the beads." The parties agree that this claim term involves the concept of clustering of the nucleic acid precipitate and the beads, and thus, the parties agree that if this claim term is to be construed,[11] the construction should begin with the word "clusters."

This claim term also includes the word "entraps," which GE proposes to construe simply and accurately as "traps." *See* GE's Br. at 11-12. Beckman does not dispute that this claim term conveys the concept of entrapment or trapping, and Beckman

[10] Beckman also ignores testimony from the inventor of the '231 and '946 Patents, Dr. Michael A. Reeve, that it would be "absurd" to say that there is no chemical interaction with the beads at all. *See infra* at 12-13.

[11] GE has no objection if the Court determines to construe this claim term, but repeats that a construction is not required, because this claim term is already understandable to nonscientists. *See* GE's Br. at 11; Kool Decl. ¶¶ 54-56.

offers no intrinsic or extrinsic evidence to the contrary.[12] But here again, Beckman seeks to add extra requirements – this time, that the precipitate "surrounds the beads" and that "the beads are passively enmeshed in the precipitate" – in an apparent attempt to support its noninfringement position. If the claims were construed to require "surround[ing]," Beckman could use that to argue that the claims require complete encirclement, on all sides of the beads. And if the claims were construed to require "passive[ ] enmesh[ment]," Beckman could use that to argue, once again, that the claims require the complete absence of any chemical interaction between the nucleic acid precipitate and the beads. But Beckman's approach ignores intrinsic and extrinsic evidence showing the claims are not as narrow as Beckman proposes.

1. The Words "Surrounds The Beads" Suggest A Requirement Of Complete Encirclement That Is Contradicted By The Evidence

Beckman asserts that "[t]he specification describes that, as the nucleic acid precipitate forms, it clusters together and *surrounds* the beads." Beckman Br. at 11 (emphasis added). But that is not what the specification says. The specification only states that the precipitated nucleic acid aggregates "around" the beads. *See*, *e.g.*, '231 patent at Figure 1a, 4:15-17, 4:30-31, 5:9-12. As GE has explained, there is an important difference between "surrounds" and "around." GE's Br. at 12-13. "Surrounds" has connotations of complete encirclement on all sides of the beads. *Id.* at 12 n.7. Such

[12] Beckman argues that "entraps" cannot be construed in isolation from "aggregated" because "the effects of aggregation and entrapment are uniquely connected in this claim." Beckman's Br. at 14-15. But Beckman offers no evidence to support this assertion, and in any event GE's proposed construction fully captures the meaning of the disputed claim term as a whole – without importing extra requirements. *See* GE's Br. at 10-13.

complete encirclement is not required. *See* GE's Br. at 12 (reprinting relevant part of Figure 1a, showing lack of complete encirclement); *see also* Kool Decl. ¶ 61.

2. The Words "Passively Enmeshed," Like The Word "Inert," Suggest A Requirement Of No Binding At All That Is Contradicted By The Evidence

Beckman's attempt to insert a "passively enmeshed" requirement into this claim term is similar to Beckman's attempt to insert an "inert or do not have an affinity" requirement into the claim term discussed in Part A above. Beckman considers "passively" to refer only to physical entrapment of the beads and not to chemical interactions with the beads. *See* Beckman Br. at 12. Beckman's attempt to exclude any chemical interaction is incorrect as explained on pages 6-10 above. And Beckman's arguments focusing specifically on the word "passively" fail for the following reasons.[13]

The only intrinsic evidence Beckman cites to support using the word "passively" is the October 22, 2003 Response To Office Action, which states:

> In contrast, the method of the present invention involves the use of magnetic beads which do not adsorb the biopolymer, at least not while the polymer remains in solution. The method involves the separate step of precipitating *the polymer* out of solution, whereby it *becomes non-specifically associated with the beads*.

Beckman's Exh. 4, Oct. 22, 1993 Response To Office Action, at 6 (emphasis added). This paragraph does not use the word "passively," nor does it imply that a complete

[13] As to the other word at issue here, "enmeshed," Beckman asserts: "Use of the active language 'aggregated around' [in the claim] illustrates that, as the precipitate clusters together and surrounds the beads, the beads become passively enmeshed in the precipitate (somewhat like fish caught in a net)." Beckman's Br. at 12. This attorney argument is not evidence, and it does nothing to support using the word "enmeshed" instead of the clearer and simpler word "traps." *See* GE's Br. at 13. And anyone who has seen fish wriggle in a net knows that they are anything but "passive."

absence of binding is required. To the contrary, it states that the precipitated polymer (the nucleic acid) becomes non-specifically associated with the beads. As explained in Part A above, non-specific association can include chemical interactions or binding. Kool Decl. ¶¶ 65-67. Thus, Beckman cannot be correct to assert that the patent claims require "passive[ ] enmesh[ment]" with no binding at all.[14]

That leaves the extrinsic evidence Beckman cites. Once again, extrinsic evidence cannot be used to contradict the intrinsic record. *Vitronics*, 90 F.3d at 1584. And once again, the extrinsic evidence does not foreclose any possibility of chemical interactions, as would be required to support adding the word "passively" to the claims. Beckman begins with product literature for the same FMP commercial embodiment discussed in Part A above. But as GE explained there, the FMP commercial embodiment cannot be used to limit the claims, and the literature includes statements showing that a complete absence of binding is not required even in this embodiment.

Beckman also attempts to rely upon U.S. Patent No. 5,665,554 ("the '554 Patent"), which is a separate patent issued to the inventor of the '231 and '946 Patents, Dr. Michael A. Reeve, for a separate invention that is not at issue in this lawsuit. Beckman is correct that the '554 Patent states that "in a preferred embodiment" of that invention, aggregation causes "passive entrapment of any magnetic particles within the vicinity of the aggregating species." Beckman's Exh. 11, '554 Patent at 2:57, 3:7-16. But such a preferred embodiment is not the entire invention, even for the '554 Patent.

[14] This prosecution history took place nearly two years before the term "becomes aggregated with and entraps" was added to the claims in September 1995. *See* GE's Exh. 11. This prosecution history does not address the disputed claim term, and thus it would not support Beckman's position even if it read as Beckman has asserted.

Beckman also invokes the Ph.D. dissertation of Rachel Brewer, a student supervised by Dr. Reeve. Again, the Brewer thesis describes an FMP commercial embodiment, not the claimed invention as a whole. *See* Beckman's Exh. 12, Excerpts of Brewer Thesis, at ii (concerning the use of FMP on an instrument called "Labstation"). And while it is true that Dr. Brewer said that "FMP works on the principle of passive entrapment," there is no evidence that the purpose of Dr. Brewer's research was to prove, and Dr. Brewer did not conclude, that the FMP embodiment involved no binding at all.

Beckman also fails to mention the deposition testimony of Dr. Reeve himself. Inventor testimony is "of little weight" during claim construction "compared to the clear import of the patent disclosure itself," *Roton Barrier, Inc. v. Stanley Works*, 79 F.3d 1112, 1126 (Fed. Cir. 1996), but worth mentioning because Dr. Reeve used the word "passively." When asked for his understanding of claim 1 of the '231 Patent, Dr. Reeve testified that the molecules in the nucleic acid precipitate "passively entrap the magnetically attractable particles." GE's Exh. 13, Reeve Dep. at 11:19-20, 12:7-11.[15] But that does not require a complete absence of chemical interaction: "You can't say there is no interaction because, you know, that would be absurd because there would be Van der Waals forces, interactions, electrostatic interactions and repulsions." *Id.* at 16:12-19. Dr. Reeve gave his opinion that such interaction "is not the driving force for this," but in the very next sentence he stated: "Providing that the beads are magnetically attractable and that they are designed *not to specifically bind* the nucleic acid in aqueous

[15] GE's Exhibit 13, containing Dr. Reeve's testimony on this topic, is attached to this brief. GE welcomes the review of Dr. Reeve's testimony in its entirety, but it is too lengthy to be copied into the text of this reply.

solution, then the nature of the beads is not as important." *Id.* at 16:19-25 (emphasis added). This accords with Dr. Kool's explanation that the *non-specific* association described in the '231 Patent can include chemical interactions or binding. Kool Decl. ¶¶ 65-67. Thus, Dr. Reeve's testimony does not support including the word "passively" in claim 1 to narrow the claim to require no binding or chemical interactions at all.

C. "Becomes Non-Specifically Associated With The Beads" ('946 Patent, Claim 1)

Term	GE's Construction	Beckman's Construction
"becomes non-specifically associated with the beads"	Interacts with the beads in a way that is not governed by the particular structure of that particular nucleic acid	1. Indefinite 2. Clusters together and surrounds the beads such that the beads are passively enmeshed in the precipitate

GE's opening brief explained in detail why this claim term is not indefinite, and why it should be construed as GE proposes. GE's Br. at 13-18. Beckman's opening brief, instead of setting out Beckman's arguments, attempted to incorporate by reference Beckman's summary judgment motion. *See* Beckman's Br. at 15-16. When GE objected to the attempted incorporation by reference, Beckman withdrew it, and Beckman agreed that Beckman will only rely during claim construction on the indefiniteness and other arguments set forth in the 20 pages of each of its claim construction briefs.[16] Accordingly, the arguments Beckman tried to incorporate by reference are not at issue for claim construction. GE will not take up the Court's time or

[16] GE objected because the day before Beckman filed its claim construction brief, the Court had Ordered that the briefing on Beckman's summary judgment motion would be continued until after Beckman provides Rule 56(f) discovery.

further space in this brief by responding to them here, and instead will only address the arguments and assertions Beckman actually made in the opening claim construction brief.

As to indefiniteness, Beckman asserts in its claim construction brief that the term "becomes non-specifically associated with the beads" was "rejected as not definite enough" and "the '231 patent claims were not allowed until this language was removed." Beckman's Br. at 15. But as explained in GE's opening brief, to prove indefiniteness, Beckman must prove that the term is "insolubly ambiguous"; "that a skilled artisan could not discern the boundaries of the claim"; and that "reasonable efforts at claim construction prove futile." GE's Br. at 14 (quoting Federal Circuit caselaw). Beckman cannot prove any of these things. The '231 Patent Examiner himself stated, in his Reasons For Allowance, that "the magnetic particles of the present invention *do not specifically associate* with the precipitated biopolymer," showing that the Examiner understood the meaning of specific association and believed these words provided a clear and understandable explanation of why he allowed the application. *See* GE's Br. at 15 (quoting GE's Exh. 5, Notice Of Allowance at 2) (emphasis added). The '946 Patent Examiner went on to allow claims with this same language, which is well-understood by persons of ordinary skill in the art. *See* GE's Br. at 16-17.[17]

[17] Beckman's claim construction brief also makes assertions about portions of the deposition testimony of Dr. Reeve, the inventor of the '231 and '946 Patents, which are only set forth and argued in Beckman's summary judgment motion and thus are not at issue during claim construction for the reasons explained above. But given that Beckman has made the assertions, GE wishes to dispel any notion that GE cannot respond to them. As GE will explain in its summary judgment papers, Dr. Reeve's testimony does not support indefiniteness. For example, the same passage that Beckman quotes in its summary judgment brief shows that Dr. Reeve understands the term "nonspecific" and uses it with its ordinary meaning.

As to the construction of "becomes non-specifically associated with the beads," Beckman merely repeats its arguments regarding the similar term "beads which do not specifically bind the nucleic acid." In Part A above, GE explained that it is not ambiguous for GE to propose constructions of these terms that reflect the meaning of "non-specific" binding or association as not governed by the particular structure of the particular nucleic acids involved. *See supra* at 2. And it is not ambiguous to refer to non-specific association as a type of "interaction" as stated in GE's proposed construction and supported by Dr. Kool's expert testimony. *See* Kool Decl. ¶ 66.

D. "Suspended" And "Re-Suspend The Beads" ('231 Patent, Claim 1; '946 Patent, Claim 1)

Term	GE's Construction	Beckman's Construction
"suspended"	Dispersed	Thoroughly dispersed throughout the solution in the absence of a magnetic field
"re-suspend the beads"	Re-disperse the beads	Thoroughly re-disperse the magnetic beads throughout the solution in the absence of a magnetic field

The parties agree that "dispersed" is an acceptable construction of "suspend," and GE's proposals reflect this.[18] But Beckman once again wants to narrow the claims by importing further requirements, this time that the beads be "thoroughly" dispersed "throughout the solution" and that this happen "in the absence of a magnetic field." This is another attempt by Beckman to influence infringement issues during claim

[18] GE does not agree, however, as suggested by note 4 on page 17 of Beckman's brief, that the degree of suspension required by the claim term "suspended" must be the same as the degree of suspension required by the claim term "re-suspend the beads." These terms appear at different points in the claims, and it is not necessary that precisely the same degree of suspension be present both times.

construction. At issue is the claim step of "adding a liquid to the precipitate and the entrapped beads to re-dissolve the nucleic acid and re-suspend the beads." GE's Exh. 1, '231 Patent at 12:35-37. One of the ways to perform the claimed invention is to leave the solution on the magnet during this claim step, and Beckman has asserted that it does just that in some of its accused products and services. *E.g.*, Beckman's Am. Counterclaim ¶ 149 (D.I. 54). The infringement analysis will thus include the question of whether the beads are re-suspended in those products and services, when they are left on the magnet, as a result of the stirring and other actions that Beckman takes to re-dissolve the nucleic acids.[19] That is the real "unanswered question" referred to on page 20 of Beckman's brief, and it is a question of infringement, not claim construction.

What Beckman is trying to do here is to dramatically narrow the claims to require that the solution *must* be taken off of the magnet during this claim step, and then that even more time *must* be taken to make sure the re-suspension of the beads is "thorough" and "throughout the solution." As explained below, Beckman's attempts to limit the claims are, once again, contradicted by the intrinsic and extrinsic record.

There is no requirement of re-suspension "in the absence of a magnetic field." As GE's opening brief explains, the claims as a whole show that when the applicant wanted to refer to a magnetic field, he did so expressly. GE's Br. at 19. And the example that Beckman block quotes on page 18 of its brief supports GE, not Beckman. Beckman's quoted language talks about re-suspending the beads "in the

[19] Dr. Kool explained that a person of ordinary skill would understand re-suspension is possible: "some degree of suspension for some period of time can be achieved even when magnetic fields are present, depending on the strength of the magnetic field and the force applied through vortexing, pipetting, or otherwise." Kool Decl. ¶ 77.

absence of the magnetic field" during the *washing* of the "pellet" containing the beads and precipitate. Beckman's Exh. 1, '231 Patent at 9:5-10. But the claims of the '231 and '946 Patents do not include such an optional washing step. Instead, the claim term at issue concerns the different step to "re-dissolve the nucleic acid and re-suspend the beads." *Id.* at 12:35-37. The following is all that the same example cited by Beckman says about the re-dissolving step: "redissolve the pellet in the required volume of TE buffer." *Id.* at 9:9-10. There is nothing about the absence of a magnetic field. If removing the magnetic field were necessary it would have been stated in the specification and claims. *See also* GE's Br. at 19-20 n.11 (discussing other specification examples).[20]

There is no requirement that the re-suspension result in "thorough" dispersion "throughout the solution." Beckman reproduces a copy of Figure 1a from the specification on page 17 of its brief, and claims that it "plainly demonstrates" a requirement that the re-suspension result in "thorough" dispersion "throughout the solution." But the specification states that the figures are only "examples." GE's Exh. 1, '231 Patent at 3:54-67. Beckman also misreads the specification's discussion of the use of larger beads that would have begun to fall to the bottom immediately upon being added to the solution. *Id.* at 2:59-64. The use of "suspension" to refer to this scenario shows that the suspension need not be "thorough" or "throughout the solution." *See* GE's Br. at 19. In fact, as GE has explained, none of the examples in the specification state

[20] Beckman also attempts to rely, once again, on a document describing an FMP commercial embodiment of the claimed invention. Beckman's Br. at 18-19. But as before, such commercial embodiments cannot be used to contradict the intrinsic record or narrow the claims. *See Smithkline*, 403 F.3d at 1339-40.

that "thorough" mixing "throughout the solution" is required. *See* GE's Br. at 18-19.[21]

Beckman is also wrong to assert, in an attorney argument unsupported by any evidence, that "thorough" dispersion "throughout the solution" is required for the claimed invention to work. Beckman's Br. at 18. GE's expert Dr. Kool has explained that one of ordinary skill in the art would understand the invention works without such uniform distribution. Kool Decl. ¶ 75. Even if the suspended or re-suspended beads were located more on the right side or left side of the tube, or more at the top or bottom, the invention would still work. *Id.*[22]

[21] The dictionary definitions Beckman cites as extrinsic evidence also fail to support Beckman's position. The dictionaries do not say that "suspension" requires *perfectly* even or uniform dispersion; rather, they say that it requires the dispersion to be "*more or less*" even or uniform. *See* Beckman's Br. at 19. As Dr. Kool explained: "This again reflects that a suspension may be less than 'thoroughly' dispersed and not 'throughout the solution' as Beckman's proposed construction would require." Kool Decl. ¶ 76.

[22] The inventor Dr. Reeve also touched on this point during his deposition. Dr. Reeve testified: "The final objective is that the point at which the nucleic acid starts to precipitate is carried out when the magnetic particles are as dispersed in space *as you can practically make them*." GE's Exh. 13, Reeve Dep. at 27:21-24 (emphasis added). This reflects the fact, as Dr. Kool explained, that perfectly uniform dispersal is not possible. Kool Decl. ¶ 75. When asked what would happen if the beads were not "uniformly" dispersed, Dr. Reeve testified: "Your yield would go down. *It is not an all or nothing process.*" *Id.* at 28:9-18 (emphasis added). This reflects that there is a tradeoff between performing mixing faster and less thoroughly and achieving higher yield by more thorough suspension. Kool Decl. ¶ 75; GE's Br. at 18-19 & n.10.

III.

CONCLUSION

For the foregoing reasons, GE's proposed constructions should be adopted.

/s/ Stephen M. Ferguson

Frederick L. Cottrell, III (#2555)
Anne Shea Gaza (#4093)
Stephen M. Ferguson (#5167)
Richards, Layton & Finger
One Rodney Square
920 N. King Street
Wilmington, DE 19801
(302) 651-7700
cottrell@rlf.com
gaza@rlf.com
ferguson@rlf.com
Attorneys for Plaintiff

OF COUNSEL:
Nicholas Groombridge
WEIL, GOTSHAL & MANGES LLP
767 Fifth Avenue
New York, NY 10153-0119
(212) 310-8000

David J. Ball, Jr.
Azra Hadzimehmedovic
Rachelle H. Thompson
Annaka Nava
WEIL, GOTSHAL & MANGES LLP
1300 Eye Street, NW, Suite 900
Washington, DC 20005
(202) 682-7000

Dated: August 27, 2010

CERTIFICATE OF SERVICE

I hereby certify that on August 27, 2010, I caused to be served by **hand delivery and electronic mail** copies of the foregoing document and electronically filed the same with the Clerk of Court using CM/ECF which will send notification of such filing(s) to the following:

Steven J. Balick
Lauren E. Maguire
Caroline Hong
Ashby & Geddes
500 Delaware Avenue
Wilmington, DE 19801
sbalick@ashby-geddes.com
lmaguire@ashby-geddes.com
chong@ashby-geddes.com

I further certify that on August 27, 2010, I caused to be served by **electronic mail** copies of the foregoing document upon the following counsel of record:

James G. Gilliland, Jr.
Townsend and Townsend and Crew LLP
Two Embarcadero Center, 8th Floor
San Francisco, CA 9411
jggilliland@townsend.com

Susan M. Spaeth
Anne M. Rogaski
Robert J. Artuz
Townsend and Townsend and Crew LLP
379 Lytton Avenue
Palo Alto, CA 94301
smspaeth@townsend.com
amrogaski@townsend.com
rjartuz@townsend.com

/s/ Stephen M. Ferguson
Stephen M. Ferguson (#5167)
ferguson@rlf.com