IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

BECKMAN COULTER, INC., Plaintiff, v. CYTEK BIOSCIENCES, INC., Defendant.	Civil Action No. 1:24-cv-00945-CFC **DEMAND FOR JURY TRIAL**

DEFENDANT CYTEK BIOSCIENCES, INC.'S
PROPOSED CLAIM CONSTRUCTIONS

Pursuant to Paragraph 15 of the Court's Scheduling Order (D.I. 25), Defendant Cytek Biosciences, Inc. ("Cytek") serves the following proposed claim constructions for the terms, phrases, and/or clauses previously identified for construction by the parties.

I. General Statement and Reservation of Rights

Cytek's proposed constructions are based upon its current knowledge and understanding of Plaintiff Beckman Coulter, Inc.'s ("Beckman Coulter" or "Plaintiff") infringement contentions and implied claim constructions and Cytek's investigation to date. Cytek reserves the right to modify, supplement, and/or amend the proposed constructions and to propose constructions for additional claim terms, phrases, and/or clauses based on the claim constructions proposed by Plaintiff, any changes to or supplementation of Plaintiff's infringement contentions, and as discovery related to claim construction and the meet-and-confer processes progress to address any additional facts or information that become available.

Cytek reserves the right to separately request construction of portions of claim terms, phrases, and/or clauses identified by the parties. Additionally, Cytek reserves the right to

separately request construction of the longer phrase in which the identified claim terms or phrases appear and to construe claim terms that are found in claims not specifically identified below. Consistent with the Court's practice not to decide indefiniteness issues during the claim construction stage, Cytek further reserves its right to assert that the Asserted Claims of U.S. Patent Nos. 10,330,582 ("'582 Patent"); 11,703,443 ("'443 Patent"); 12,174,106 ("'106 Patent"), and 12,174,107 ("'107 Patent") are invalid under either pre-AIA or AIA 35 U.S.C. § 112. The proposed constructions should not be interpreted as an admission that any claim satisfies the written description, enablement, or definiteness requirements set forth in pre-AIA or AIA 35 U.S.C. § 112. Cytek further reserves the right to adopt the "plain and ordinary meaning" of any claim term, phrase, or clause.

II. Proposed Constructions

Cytek proposes to construe the previously identified claim terms, phrases, and/or clauses as follows:

#	Claim Term	Cytek's Proposed Construction	Intrinsic Evidence[1]
1	"collecting optical element" ('106 Patent, cls. 1, 2, 13)	35 U.S.C. § 112, ¶ 6 / 35 U.S.C. § 112(f). **Function**: collect and focus fluorescent light emitted by a particle illuminated by the light source such that the fluorescent light leaving the collecting optical element converges. **Structure**: (1) a concave mirror and an aberration corrector plate attached to the flow cell with the flow cytometer's viewing zone	'582 Patent, Abstract; 2:41-43; 3:7-36; 5:47-65; 6:26-38; 6:59-66; 7:15-22; 7:32-38; 7:49-56; 7:57-8:11; 8:41-43; 9:10-24; 10:31-36; 10:60-64; 10:66-67; 11:4-9; 11:19-24; 14:41-54; 14:62-67; 15:9-18; 15:31-32; 15:36-41; 15:56-67; 16:8-14; 21:51-57; 33:14-42; 34:15-17; 34:43-55; 35:14-36:55;

[1] The Asserted Patents share a common specification. While Cytek identifies intrinsic support within the '582 Patent specification, it is with the understanding that Cytek is also identifying parallel disclosures in the specifications for the '443, '106, and '107 Patents.

#	Claim Term	Cytek's Proposed Construction	Intrinsic Evidence[1]
		located between the mirror and the plate; or (2) a concave mirror attached to the flow cell and an aberration corrector plate with the flow cytometer's viewing zone located between the mirror and the plate; or (3) a concave mirror and an aberration corrector plate attached to the flow cell with the flow cytometer's viewing zone located between the mirror and the plate and a chromatic compensating doublet lens; or (4) a concave mirror attached to the flow cell and an aberration corrector plate with the flow cytometer's viewing zone located between the mirror and the plate and a chromatic compensating doublet lens. Alternatively, if not construed as means-plus-function: "(1) a concave mirror and an aberration corrector plate attached to the flow cell with the flow cytometer's viewing zone located between the mirror and the plate; or (2) a concave mirror attached to the flow cell and an aberration corrector plate with the flow cytometer's viewing zone located between the mirror and the plate; or (3) a concave mirror and an aberration corrector plate attached to the flow cell with the flow cytometer's viewing zone located between the mirror and the plate and a chromatic compensating doublet lens; or (4) a concave mirror attached to the	51:45-57; FIGs. 1, 8, 8A, 8B, 9A, 10, 11, 12, 13, 36 '582 Patent File History, Nonprovisional Application No. 15/638,461, cl. 1, 187, 244, 263, 275, 285

#	Claim Term	Cytek's Proposed Construction	Intrinsic Evidence[1]
		flow cell and an aberration corrector plate with the flow cytometer's viewing zone located between the mirror and the plate and a chromatic compensating doublet lens," otherwise indefinite.	
2	"collimated beam" ('443 Patent, cl. 10; '582 Patent, cls. 1, 3, 6, 14, 17, 18)	Indefinite.[2] If not indefinite, should be construed as "a beam wherein all rays of light originating from a point source are projected parallel with each other and the rays within the beam are neither converging (*i.e.*, a focused beam) or diverging"	'582 Patent, Abstract; 2:26-29; 4:34-53; 6:39-50; 9:51-65; 20:18-33; 25:65-67; 26:10-17; 20:62-21:11; 44:58-63, 44:66-45:4; 45:22-29; 45:49-51; FIGs. 25, 27, 28 '582 Patent File History, Nonprovisional Application No. 15/638,461, cls. 1, 162, 168, 207, 244, 266, 301 Provisional Application No. 61/715,819 (filed October 18, 2012), [0006]; [0007]; [0016]; FIGs. 1, 4; cls. 1, 7 '412 Patent File History, October 27, 2016 Applicant Reply to Office Action of June 27, 2016
3	"collimating optical element" ('582 Patent, cls.	35 U.S.C. § 112, ¶ 6 / 35 U.S.C. § 112(f).[3]	'582 Patent, Abstract; 2:26-29; 4:34-53; 6:39-

[2] Cytek recognizes the Court's practice to defer a determination on indefiniteness until after claim construction proceedings and, consistent with that practice, Cytek is not requesting that the Court make an indefiniteness determination at this time.

[3] Where Cytek asserts a term invokes 35 U.S.C. § 112, ¶ 6 / 35 U.S.C. § 112(f) and identifies corresponding structure as being indefinite, Cytek only requests at this time that the Court address

#	Claim Term	Cytek's Proposed Construction	Intrinsic Evidence[1]
	1, 6, 14, 20, 18, 21; '106 Patent, cls. 1, 13)	'582 Patent, cl. 1: **Function**: (1) receive light from a light source; and (2) project a "collimated beam" onto an optical relay element. **Structure**: Indefinite. '582 Patent, cl. 14: **Function**: (1) receive light from a light source; and (2) project a "collimated beam" including a first image onto an optical relay element. **Structure**: Indefinite. '582 Patent, cl. 20: **Function**: (1) receive light from a light source; and (2) project a first image onto an optical relay element. **Structure**: Indefinite. '106 Patent, cls. 1, 13: **Function**: (1) receive fluorescent light collected by the collecting optical element; and (2) collimate the fluorescent light that is projected onto a first dichroic filter. **Structure**: Indefinite.	50; 9:51-65; 20:18-33; 20:62-21:11; 44:58-61; 44:66-45:4; FIGs. 25, 27, 28 '582 Patent File History, Nonprovisional Application No. 15/638,461, cls. 1, 162, 168, 207, 244, 266, 301 Provisional Application No. 61/715,819 (filed October 18, 2012), [0006]; [0007]; [0016]; FIGs. 1, 4; cls. 1, 7 '412 Patent File History, October 27, 2016 Applicant Reply to Office Action of June 27, 2016

the threshold question of whether 35 U.S.C. § 112, ¶ 6 / 35 U.S.C. § 112(f) applies to the term, and if so, the corresponding function for the term.

#	Claim Term	Cytek's Proposed Construction	Intrinsic Evidence[1]
		Alternatively, if not construed as means-plus-function: "an optical component at a focal distance from a light source that projects a 'collimated beam' centered on the optical axis such that a 'portion of the collimated beam' is projected onto a first focusing optical element," and another 'portion of the collimated beam' is projected onto a first optical relay element," otherwise indefinite.	
4	"collimating" / "collimate" ('582 Patent, cls. 1, 14, 20; '106 Patent, cls. 1, 13, 17)	Indefinite.[4] If not indefinite, should be construed as "make rays of light within a beam that originate from a point source parallel to each other and not converging (*i.e.*, focused) or diverging"	'582 Patent, Abstract; 2:26-29; 4:34-53; 6:39-50; 20:18-33; 20:62-21:11; 44:20-22; 44:28-41; 44:58-63; 44:66-45:4; 45:49-51; 45:22-29; FIGs. 25, 27, 28 '582 Patent File History, Nonprovisional Application No. 15/638,461, cls. 1, 162, 168, 207, 244, 266, 301 Provisional Application No. 61/715,819 (filed October 18, 2012), [0006]; [0007]; [0016]; FIGs. 1, 4; cls. 1, 7 '412 Patent File History, October 27, 2016 Applicant Reply to Office Action of June 27, 2016

[4] *See supra*, note 2.

#	Claim Term	Cytek's Proposed Construction	Intrinsic Evidence[1]
5	"first" / "second" ('582 Patent, cls. 1, 3, 6, 14, 15, 17, 18, 20, 21, 22, 25, 26; '106 Patent, cl. 1; '443 Patent, cls. 9, 10)	**First:** "initial [curved mirror / focusing optical element / filter/ optical filter / dichroic filter / semiconductor detector / image] in the optical path through the WDM," otherwise indefinite. **Second**: "second sequential [filter / focusing optical element / semiconductor detector] after an initial [filter / focusing optical element / semiconductor detector / image] in the optical path through the WDM," otherwise indefinite.	'582 Patent, 44:58-61; 45:4-15; 45:32-38; 46:17-26; 46:36-42; FIG. 25
6	"flow cytometer" ('443 Patent, cls. 11, 13, 15, 16, 17, 18; '106 Patent, cls. 1, 2, 10, 11, 13, 14, 17; '107 Patent, cls. 1, 3, 5, 7, 9-12, 14, 16-18, 26, 27, 29, 30; '582 Patent, cls. 1, 20)	Preamble is limiting. "A system including at least the following main components: 1. A flow cell through which a liquid stream, usually called a sheath flow, liquid or fluid, carries and hydrodynamically aligns cells or particles so that they pass single file through the flow cell. 2. A measuring subsystem system coupled to the flow cell that detects cells or particles passing through the flow cell and is usually either: a. an impedance or conductivity measuring subsystem; or b. an optical illumination subsystem together with an optical sensing subsystem.	WO 2013/181453 at1:33-2:12; '582 Patent, Abstract; 2:36-53; 4:34-60; 27:59-28:13; 43:30-42; FIG. 1 *See also* Intrinsic Evidence cited for "collecting optical element," "collimating optical element," "focusing optical element," and "wavelength division multiplexer (WDM)"

#	Claim Term	Cytek's Proposed Construction	Intrinsic Evidence[1]
		3. A conversion subsystem for converting the output signal from the measuring subsystem into computer processable data. 4. A computer for analyzing the data produced by the conversion subsystem."	
7	"focusing lenses . . . configured to focus light" ('107 Patent, cls. 13, 17)	"lenses that capture all collimated light rays that pass through a filter and project them as converging rays to the focal point of the lens," otherwise indefinite.	'582 Patent, 9:51-65; 20:18-33; 20:40-44; 20:62-21:11; 44:58-63; 44:66-45:4; 45:22-31; 47:18-21; FIGs. 25, 27, 28 '582 Patent File History, Nonprovisional Application No. 15/638,461, cls. 1, 162, 168, 207, 244, 266, 301 Provisional Application No. 61/715,819 (filed October 18, 2012), [0006]; [0007]; [0016]; FIGs. 1, 4; cls. 1, 7 '412 Patent File History, October 27, 2016 Applicant Reply to Office Action of June 27, 2016
8	"focusing optical element" ('582 Patent, cls. 1, 3, 17, 18, 26; '106 Patent, cl. 14)	35 U.S.C. § 112, ¶ 6 / 35 U.S.C. § 112(f).[5] '582 Patent, cl. 1:	'582 Patent, 9:51-65; 20:18-33; 20:40-44; 20:62-21:11; 44:58-63; 44:66-45:4; 45:22-31; 47:18-21; FIGs. 25, 27, 28

[5] *See supra*, note 3.

#	Claim Term	Cytek's Proposed Construction	Intrinsic Evidence[1]
		Function: (1) receive at least "a portion of a collimated beam" reflected by the optical relay element; (2) focus the portion of the collimated beam received from the optical relay element onto a semiconductor detector. **Structure**: "focusing lens that is of a size that captures all light rays of the at least a portion of a 'collimated beam.'" '582 Patent, cl. 17: **Function**: (1) receive the "collimated beam" from the optical relay element at the extended collimated distance and (2) focus the collimated beam onto a first semiconductor detector. **Structure**: Indefinite. '582 Patent, cl. 20: **Function**: focus the light from the optical relay element to a size smaller than the object of the light source onto a semiconductor detector. **Structure**: "focusing lens that is of a size that captures all light rays of the at least a portion of a 'collimated beam.'" '106 Patent, cl. 14: **Function**: focus the band of fluorescent light passing through a dichroic filter in the row of dichroic filters onto a	'582 Patent File History, Nonprovisional Application No. 15/638,461, cls. 1, 162, 168, 207, 244, 266, 301 Provisional Application No. 61/715,819 (filed October 18, 2012), [0006]; [0007]; [0016]; FIGs. 1, 4; cls. 1, 7 '412 Patent File History, October 27, 2016 Applicant Reply to Office Action of June 27, 2016

#	Claim Term	Cytek's Proposed Construction	Intrinsic Evidence[1]
		corresponding semiconductor detector. **Structure**: "focusing lens that is of a size that captures all light rays of the band of fluorescent light passing through a dichroic filter." Alternatively, if not construed as means-plus-function: "lens that is of a size that captures all light rays of the at least a portion of a 'collimated beam' and projects a focused beam," otherwise indefinite.	
9	"image" ('582 Patent, cls. 1, 14, 15, 20, 21, 22, 25, 26)	"a representation of an object (e.g., light source) where rays of light from points on the object are focused to a corresponding point by an optical component," otherwise indefinite.	
10	"optical element" ('443 Patent, cls. 13, 17, 18)	Invokes 35 U.S.C. § 112, ¶ 6 / 35 U.S.C. § 112(f).[6] '443 Patent, cl. 13: **Function**: detect scattered light emitted by the particle in the flow channel and illuminated by a light source. **Structure**: Indefinite. '443 Patent, cl. 17: **Function**: (1) detect scattered light emitted by the particle in the	'582 Patent, Abstract; 2:41-43; 3:7-36; 5:47-65; 6:26-38; 6:59-66; 7:15-22; 7:32-38; 7:49-56; 7:57-8:11; 8:41-43; 9:10-24; 10:31-36; 10:60-64; 10:66-67; 11:4-9; 11:19-24; 14:41-54; 14:62-67; 15:9-18; 15:31-32; 15:36-41; 15:56-67; 16:8-14; 21:51-57; 33:14-42; 34:15-17; 34:43-55; 35:14-36:55; 51:45-57; FIGs. 1, 8, 8A, 8B, 9A, 10, 11, 12, 13, 36

[6] *See* supra, note 3.

#	Claim Term	Cytek's Proposed Construction	Intrinsic Evidence[1]
		flow channel and illuminated by a light source; and (2) output, based on the detected scattered light, the light to the WDM via the optical fiber. **Structure**: Indefinite. '443 Patent, cl. 18: **Function**: (1) detect scattered light emitted by the particle in the flow channel and illuminated by the one or more light sources and (2) output light to the WDM via the optical fiber. **Structure**: Indefinite.	'582 Patent File History, Nonprovisional Application No. 15/638,461, cl. 1, 187, 244, 263, 275, 285
11	"optical subsystem" ('582 Patent, cls. 1, 2, 3, 6, 14, 15, 17, 18, 20, 21, 22, 23, 25, 26)	Preamble is limiting. "subsystem of a flow cytometer that includes components for separating and detecting different wavelengths of light"	'582 Patent, 2:38-40; 2:54-67; 12:62-13:26
12	"portion of the …" ('582 Patent, cls. 1, 3; '443 Patent, cls. 1, 18; '107 Patent, cls. 1, 16; '106 Patent, cl. 1)	"a subset of the spectrum of wavelengths of light within a defined beam" otherwise indefinite.	'582 Patent, 2:30-33; 2:52-53; 4:55-60; 6:39-47; 7:1-3; 8:51-55; 9:51-57; 20:19-25; 20:34-39; 20:66-21:3; 23:19-21; 43:38-39; 44:24-26; 45:8-15; 45:44-49; FIGs. 25, 27, 28
13	"produce a … image" ('582 Patent, cls. 1, 14)	Indefinite.	
14	"project a … image" ('582 Patent, cl. 14, 21)	Indefinite.	
15	"wavelength division multiplexer (WDM)" ('443 Patent, cls. 1, 2, 3, 4, 6, 7, 9, 10, 16, 18; '106 Patent, cls. 1, 2, 13, 17;	Preamble is limiting. "at least two optical elements that optically separate light into color bands by collimating light and	'582 Patent, 2:26-29, 2:30-35; 2:52-53, 4:34-60, 5:11-20; 6:39-50, 7:1-3, 8:51-55, 9:51-65, 20:18-33; 20:62-21:11;

#	Claim Term	Cytek's Proposed Construction	Intrinsic Evidence[1]
	'107 Patent, cls. 1, 5, 10, 16, 17, 26)	projecting a collimated beam into a cascaded unit-magnification image relay architecture, and not a converging beam (*i.e.*, focused beam) or diverging beam"	21:40-48; FIGs. 25, 27, 28

III. Proposed Terms, Phrases, and/or Clauses Reserved For Later Resolution

Consistent with the Court's practice not to decide indefiniteness issues during claim construction proceedings, and Cytek's May 9, 2025 proposal to Plaintiff to narrow the disputes to be presented to the Court during the current phase of claim construction, Cytek reserves the following previously identified terms, phrases, and/or clauses for later resolution:

- "a corresponding portion of multiple portions of light" / "one or more portions of the light" ('443 Patent, cls. 1, 3, 18)
- "a first dichroic filter optically disposed between the first curved mirror and the first semiconductor detector … the dichroic filter configured to allow the first color band in the fluorescent light to pass through the first dichroic filter onto the first semiconductor detector" ('106 Patent, cl. 1)
- "a first focusing optical element arranged to receive at least a portion of the collimated beam reflected by the optical relay element … wherein the first focusing optical element is configured to focus the portion of the collimated beam received from the optical relay element onto the first semiconductor detector" ('582 Patent, cl. 1)
- "arranged near / arranged near the [first / second] image" ('582 Patent, cls. 20, 26)
- "benchtop flow cytometer" ('107 Patent, cls. 7, 11, 27)
- "collimated distance" / "the collimated beam has a collimated distance" ('582 Patent, cls. 14, 17)
- "compact" / "the flow cytometer is compact" ('107 Patent, cls. 8, 12, 28)
- "configured to receive light from the optical element" ('443 Patent, cl. 18)
- "element" / "elements" ('443 Patent, cl. 4)
- "extend the collimated distance of the collimated beam" ('582 Patent, cl. 14)

- “first collimated beam” / “second collimated beam” (’443 Patent, cl. 10)
- “first optical filter” (’582 Patent, cl. 6) (as to “optical filter”)
- “light output by the optical element” (’443 Patent, cl. 17)
- “substantially full spectrum of visible light” (’107 Patent, cls. 9, 29)
- “substantially linear” (’107 Patent, cl. 2)
- “substantially the same” (’582 Patent, cls. 15, 20, 21)
- “the optical distance from the collimating optical element to the [first / second] image” (’582 Patent, cl. 21)
- “the optical element is configured to output, based on the detected scattered light, the light to the WDM via the optical fiber” (’443 Patent, cls. 13, 18)
- “the optical distance from the collimating optical element to the [first / second] image” (’582 Patent, cl. 21)

By presently reserving these identified terms, Cytek does not waive its right to later propose these terms, phrases, and/or clauses for construction, and/or to challenge these terms, phrases, and/or clauses as indefinite, lacking written description, and/or being not fully enabled under pre-AIA or AIA 35 U.S.C. § 112.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing **DEFENDANT CYTEK BIOSCIENCES, INC.'S PROPOSED CONSTRUCTIONS** was served on the following persons by email on May 14, 2025:

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