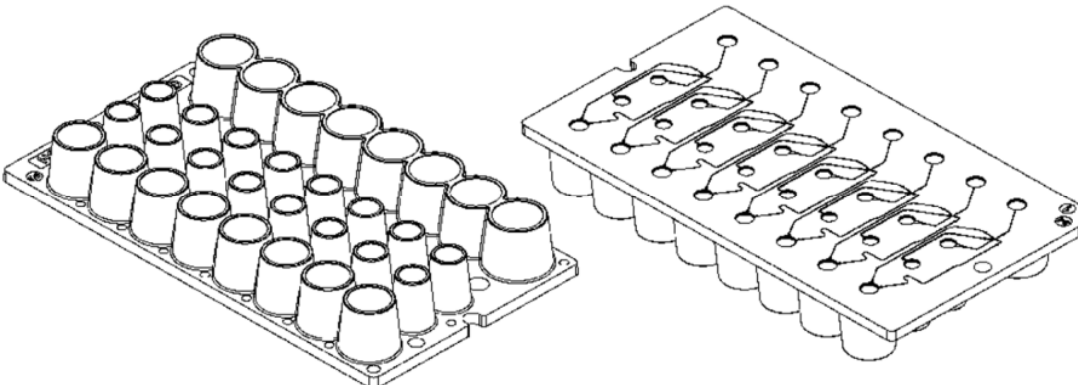
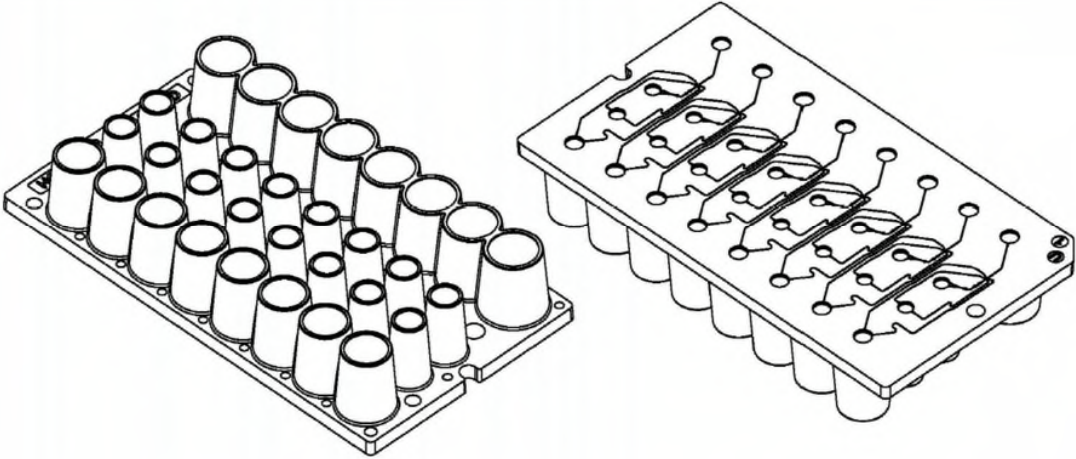
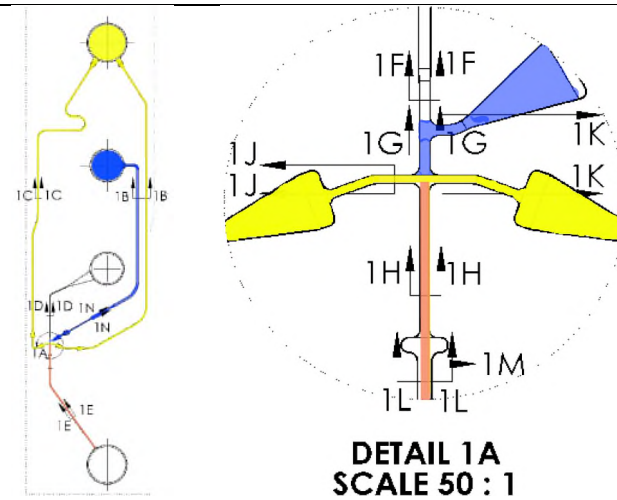


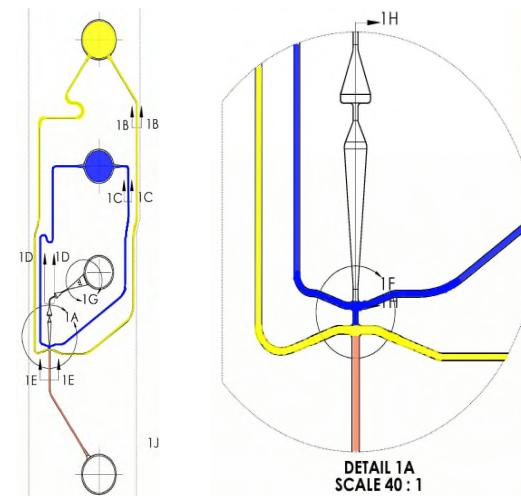
Exhibit B: Initial Infringement Claim Chart – U.S. Patent No. 9,562,837

Claim Language '837 Patent	10X's Double Junction Accused Products
<p>Claim 1[a]. An assembly, the assembly comprising:</p>	<p>To the extent the preamble is limiting, the 10X Double Junction Accused Products literally infringe this claim element because they are an assembly:</p>  <p>GEM 3.34 Schematic (10X1679-000003353) at 3353 (showing channels in the horizontal plane of the chip)</p>

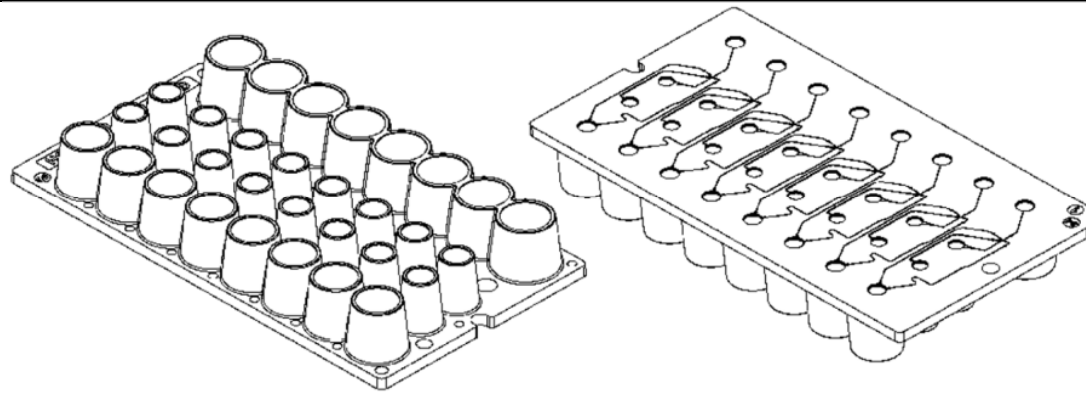
	 <p>10X GEM U Schematic (10X-000256405) at 406.</p> <p>Single Cell 3' v3 User Guide (10X1679-000002059) at 2084; Single Cell V(D)J User Guide (10X1679-000002997) at 3027; Single Cell ATAC User Guide (10X1679-000001131) at 1158; Genome User Guide v2 (10X1679-000000679) at 710.</p>
<p>[b] a microchannel in a horizontal plane;</p>	<p>The 10X Double Junction Accused Products literally infringe this element because they include a microchannel (orange) that is in the horizontal plane of the chip:</p>



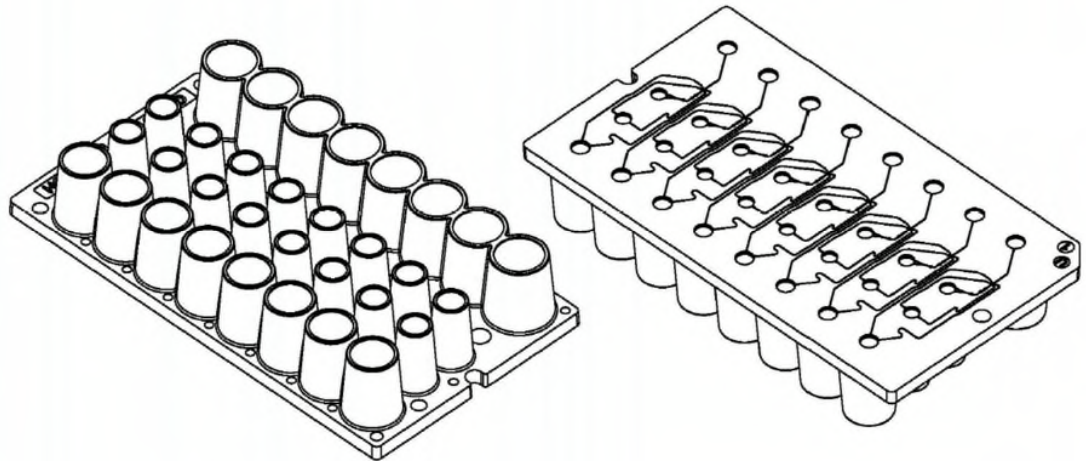
10X GEM 3.34 Schematic (10X1679-000003353) at 3354.



10X GEM U Schematic (10X-000256405) at 406.



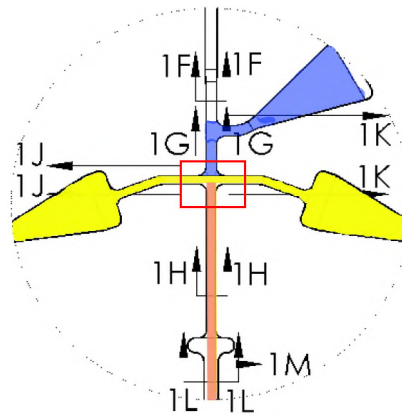
GEM 3.34 Schematic (10X1679-000003353) at 3353 (showing channels in the horizontal plane of the chip).



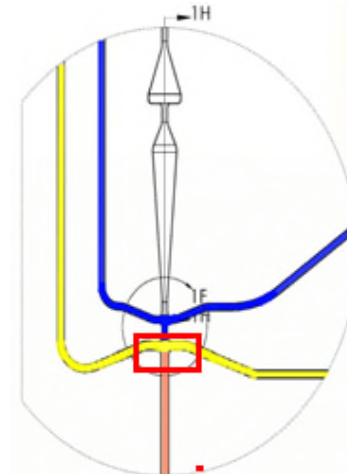
10X GEM U Schematic (10X-000256405) at 406.

[c] at least one droplet formation module comprising a sample inlet, an immiscible fluid inlet, and a junction,

The 10X Double Junction Accused Products literally infringe this element because they include at least one droplet formation module comprising a sample inlet (blue), an immiscible fluid inlet (yellow), and a junction (red square):

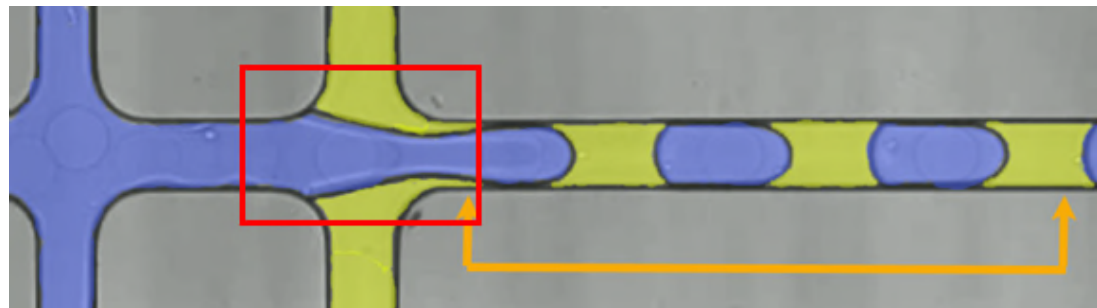


**DETAIL 1A
SCALE 50 : 1**



**DETAIL 1A
SCALE 40 : 1**

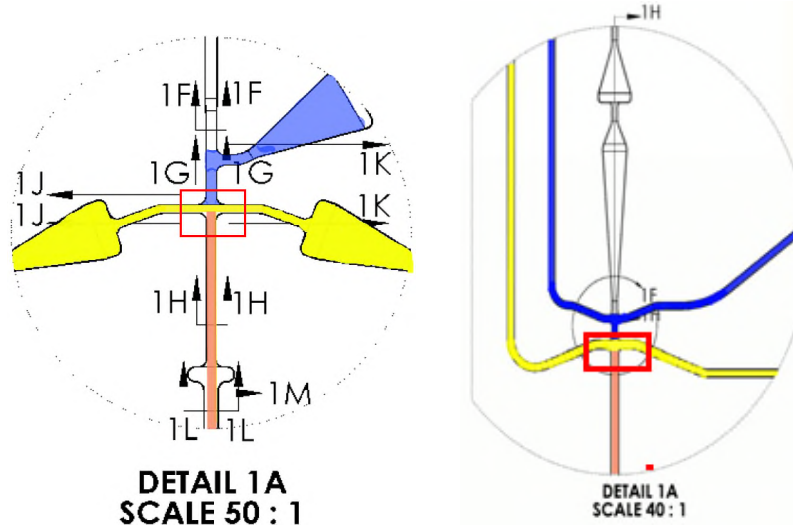
10X GEM 3.34 Schematic (10X1679-000003353) at 3354; 10X GEM U Schematic (10X-000256405) at 406.



10X Double Junction Chip Video (10X-000407436).

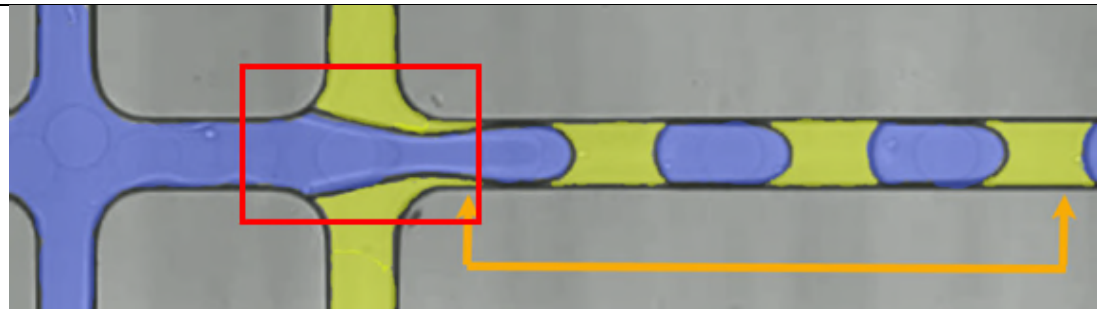
[d] wherein the junction is located between the sample inlet and the microchannel and the droplet formation module is configured to produce droplets comprising the sample surrounded by the immiscible fluid; and

The 10X Double Junction Accused Products literally infringe this element because they include a junction (red square) located between the sample inlet (blue) and the microchannel (orange):

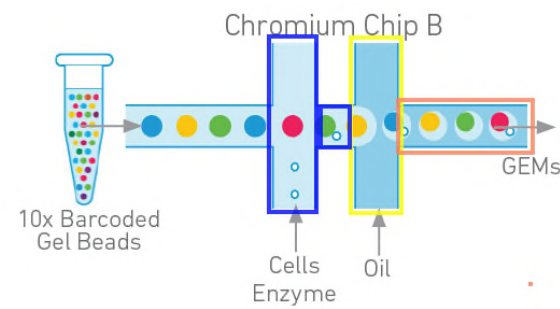


10X GEM 3.34 Schematic (10X1679-000003353) at 3354; 10X GEM U Schematic (10X-000256405) at 406.

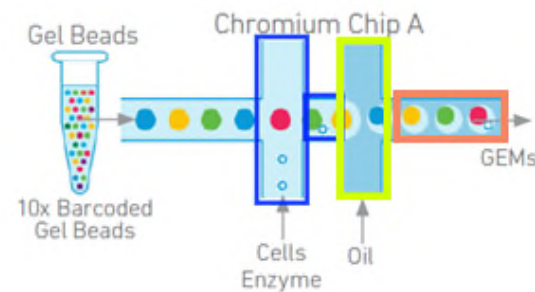
The droplet formation module comprises a sample inlet (blue), an immiscible fluid inlet (yellow), and a junction (red square), as shown above and described in element 1(c), that is configured to produce droplets containing sample and surrounded by a partitioning oil (immiscible fluid):



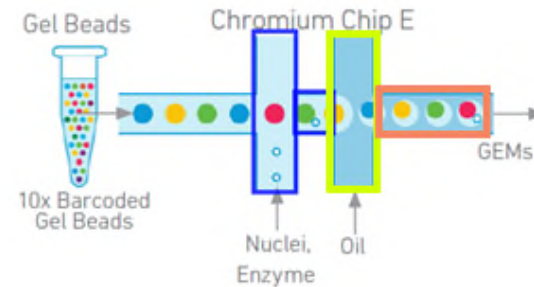
10X Double Junction Chip Video (10X-000407436) (showing sample containing droplets produced at the droplet generation region surrounded by partitioning oil (yellow)).



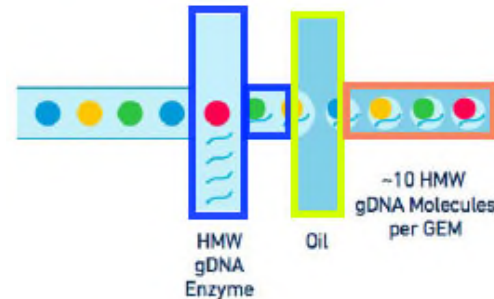
Single Cell 3' v3 User Guide (10X1679-000002059) at 2070 (showing oil flowing through the main channel).



Single Cell V(D)J User Guide (10X1679-000002997) at 3013.



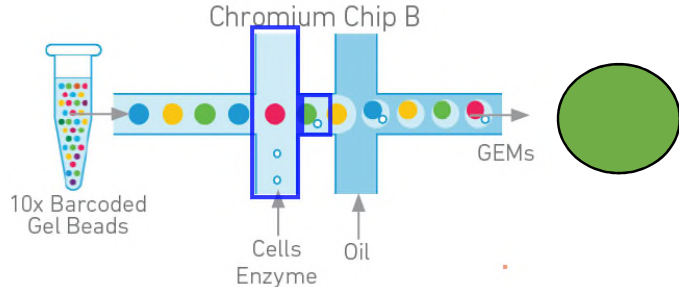
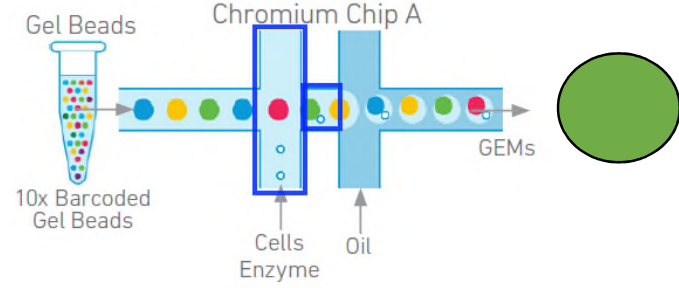
Single Cell ATAC User Guide (10X1679-000001131) at 1143.

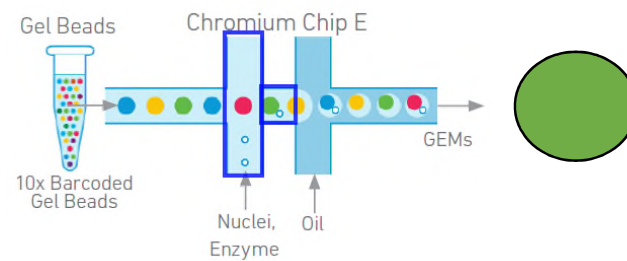


Genome User Guide v2 (10X1679-000000679) at 692.

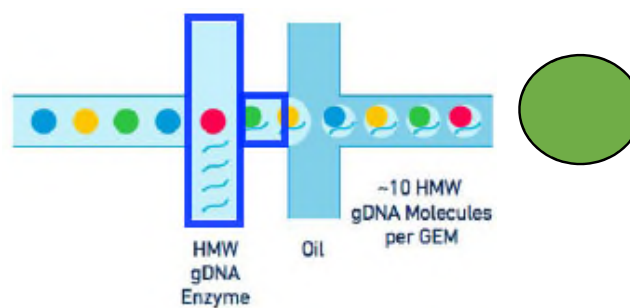
See also Single Cell 3' v3 User Guide (10X1679-000002059) at 2070 ("It is done by partitioning thousands of cells into nanoliter-scale Gel Beads-in-emulsion (GEMs)"); *id.* ("GEMs are generated by combining barcoded Single Cell 3' v3 Gel Beads, a Master Mix containing cells and Partitioning Oil."); Single Cell V(D)J User Guide (10X1679-000002997) at 3013 ("It does so by partitioning thousands of cells into nanoliter-scale Gel Beads-in-emulsion (GEMs)."); *id.* ("GEMs are generated by combining barcoded Single Cell 5' Gel Beads, a Master Mix with cells, and Partitioning Oil on Chromium Chip A.");

See also Single Cell ATAC User Guide (10X1679-000001131) at 1143 ("This is achieved by transposing nuclei in bulk solution; then using a microfluidic chip, the nuclei are partitioned into nanoliter-scale Gel Beads-in-emulsion (GEMs)."); *id.* ("GEMs are

	<p>generated by combining barcoded Gel Beads, transposed nuclei, a Master Mix, and Partitioning Oil on a Chromium Chip E.").</p> <p><i>See also</i> Genome User Guide v2 (10X1679-000000679) at 692 ("In the microfluidic Genome Chip, a library of Genome Gel beads is combined with an optimal amount of HMW template gDNA in Master Mix and partitioning oil to create Gel Bead-in-Emulsions (GEMs)."); <i>id.</i> at 706 ("[S]lowly transfer 90 μl Sample Master Mix-denatured gDNA mixture into the bottom of wells in the row labeled 1."); <i>id.</i> at 750 ("aqueous sample volume").</p>
<p>[e] at least one downstream separation chamber comprising a droplet receiving chamber inlet and at least one droplet receiving outlet,</p>	<p>The 10X Double Junction Accused Products literally infringe this element because they include at least one downstream separation chamber (green circle).</p>  <p>Single Cell 3' v3 User Guide (10X1679-000002059) at 2070 (showing droplets flowing towards a separation chamber).</p>  <p>Single Cell V(D)J User Guide (10X1679-000002997) at 3013.</p>

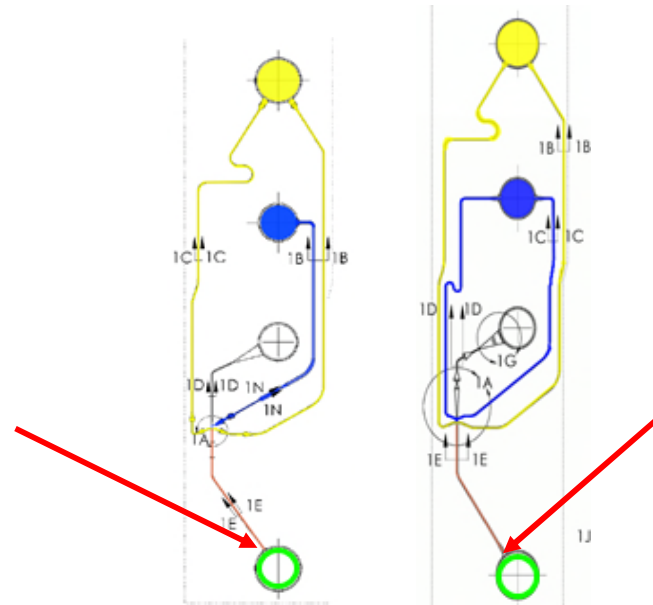


Single Cell ATAC User Guide (10X1679-000001131) at 1143.



Genome User Guide v2 (10X1679-000000679) at 692.

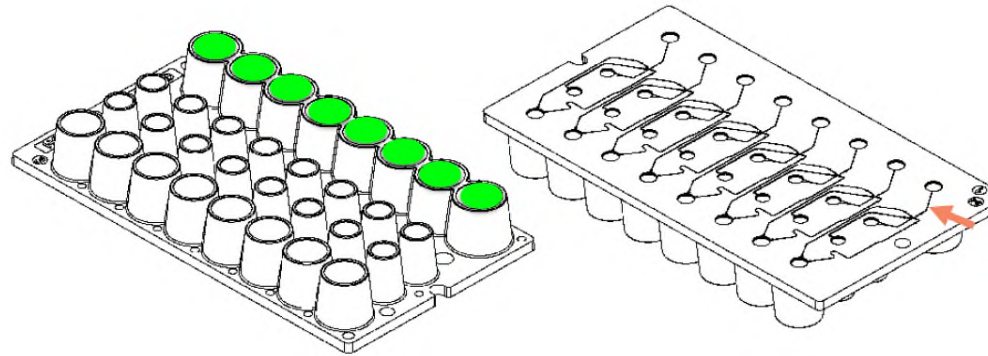
The separation chamber (green) comprising a droplet receiving chamber inlet, identified below by the red arrow as the interface between the microchannel (orange) and separation chamber (green) below. At this interface, the droplets enter the separation chamber.



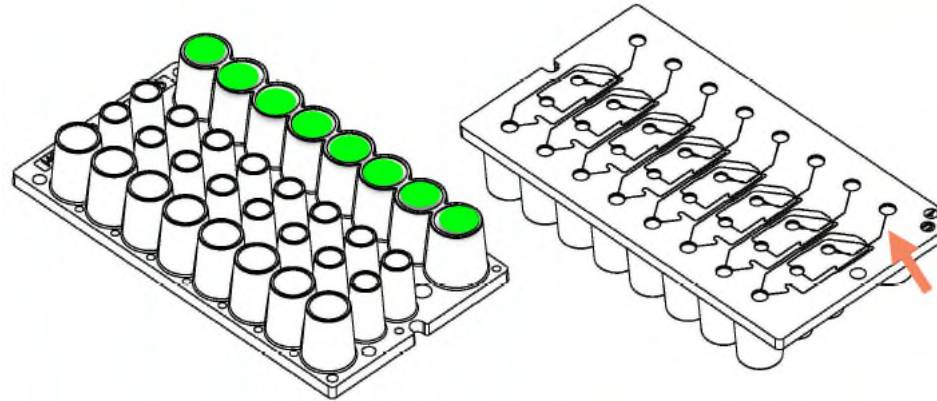
10X GEM 3.34 Schematic (10X1679-000003353) at 3354; 10X GEM U Schematic (10X-000256405) at 406.

The separation chamber also comprises a droplet receiving outlet for removing the droplets from the separation chamber following droplet generation, which is shown below as the location where the pipette is inserted to remove the "GEMs":

	<div data-bbox="835 219 1711 548" data-label="Image"> </div> <p data-bbox="751 557 1822 691">Single Cell 3' v3 User Guide (10X1679-000002059) at 2084; 10X GEM 3.34 Schematic (10X1679-000003353) at 3353; <i>see also</i> Single Cell V(D)J User Guide (10X1679-000002997) at 3027; Single Cell ATAC User Guide (10X1679-000001131) at 1158; Genome User Guide v2 (10X1679-000000679) at 710.</p> <p data-bbox="751 727 1843 964">To the extent 10X claims that outlet used to remove the droplets do not literally infringe the "droplet receiving outlet" element, such a structure would still infringe under the doctrine of equivalents. The outlet is configured to allow substantially only droplets to be removed from the separation chamber. Thus, the outlet performs the same function (allowing droplets to be removed from the separation chamber), in the same way (allowing droplets to flow out of the separation chamber through an outlet), and to achieve the same result (droplets are removed from the separation chamber through an outlet).</p>
<p data-bbox="247 1000 720 1091">[f] wherein the separation chamber is upright to the microchannel and out of the horizontal plane;</p>	<p data-bbox="751 1000 1822 1091">The 10X Double Junction Accused Products literally infringe this element because the separation chamber (green) is upright to the microchannel (orange arrow), and out of the horizontal plane:</p>



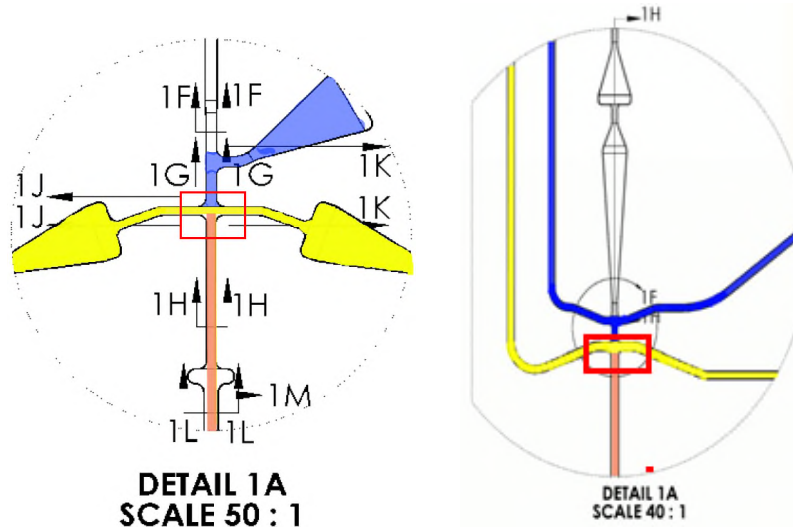
10X GEM 3.34 Schematic (10X1679-000003353) at 3353.



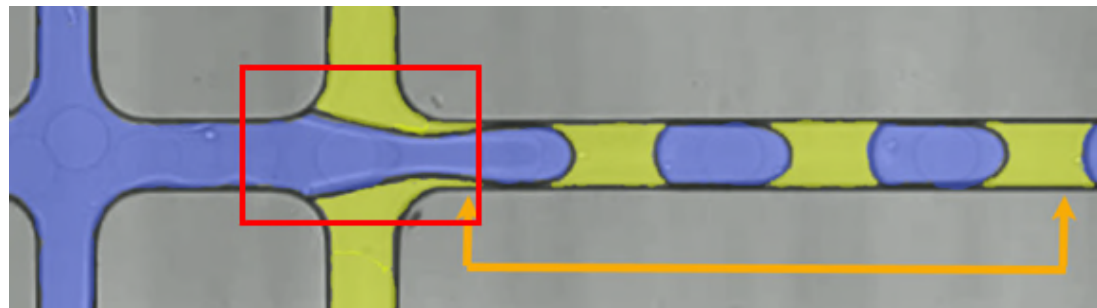
10X GEM U Schematic (10X-000256405) at 405; *see also* Single Cell 3' v3 User Guide (10X1679-000002059) at 2076, 2084 (showing separation chamber sticking out of the top surface of the chip); Single Cell V(D)J User Guide (10X1679-000002997) at 3019, 3027 (showing separation chamber sticking out of the top surface of the chip); Single Cell ATAC User Guide (10X1679-000001131) at 1147, 1158 (showing separation chamber sticking out of the top surface of the chip); Genome User Guide v2 (10X1679-000000679) at 710, 742 (showing separation chamber sticking out of the top surface of the chip).

[g] wherein the droplet formation module and the separation chamber are in fluid communication with each other via the microchannel; and

The 10X Double Junction Accused Products literally infringe this element because they include a droplet formation module, comprising a sample inlet (blue), an immiscible fluid inlet (yellow), and a junction (red square), as shown below and described in element 1(c):

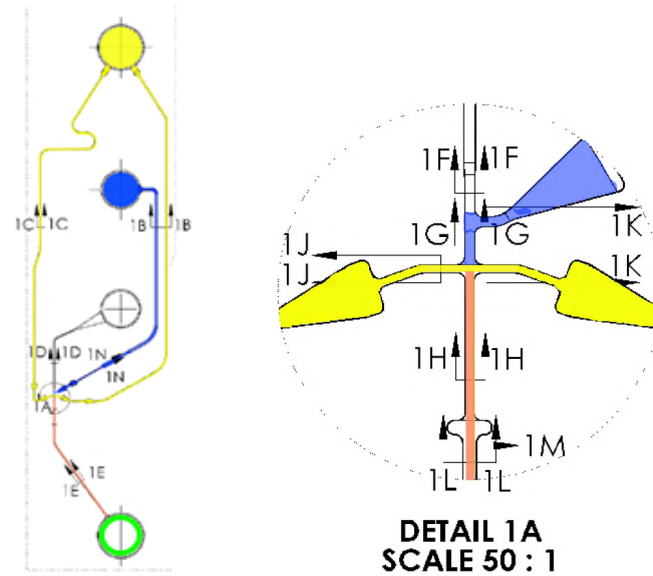


10X GEM 3.34 Schematic (10X1679-000003353) at 3354; 10X GEM U Schematic (10X-000256405) at 406.



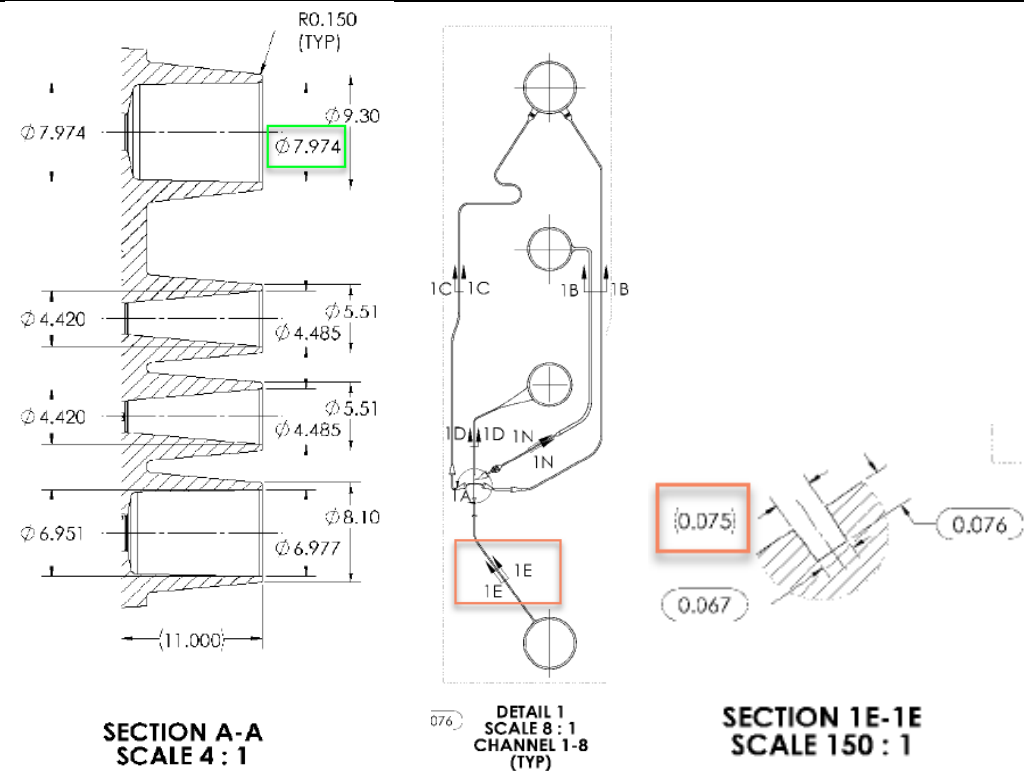
10X Double Junction Chip Video (10X-000407436).

The droplet formation module is in fluid communication with the separation chamber (green) via the microchannel (orange):

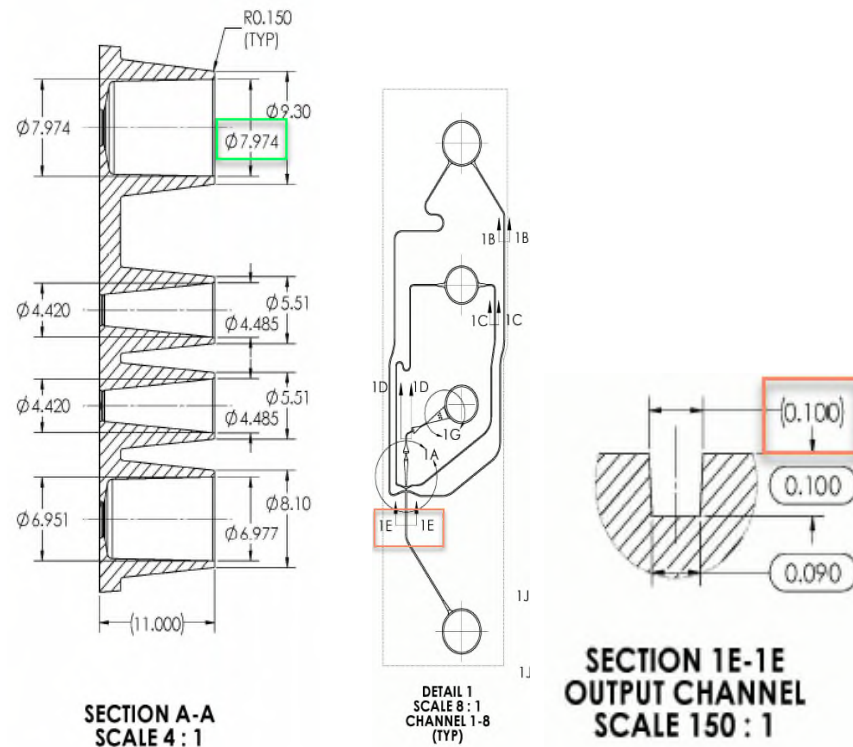


10X GEM 3.34 Schematic (10X1679-000003353) at 3354.

	<p>10X GEM U Schematic (10X-000256405) at 406.</p>
<p>[h] wherein the separation chamber has a wider cross-section than the microchannel cross-section to accumulate a plurality of droplets comprising the sample and is of a volume sufficient to separate the plurality of droplets comprising the sample from the immiscible fluid within the separation chamber.</p>	<p>The 10X Double Junction Accused Products literally infringe this element because the separation chamber has a wider cross-section than the microchannel cross section, as shown in 10X schematics:</p>



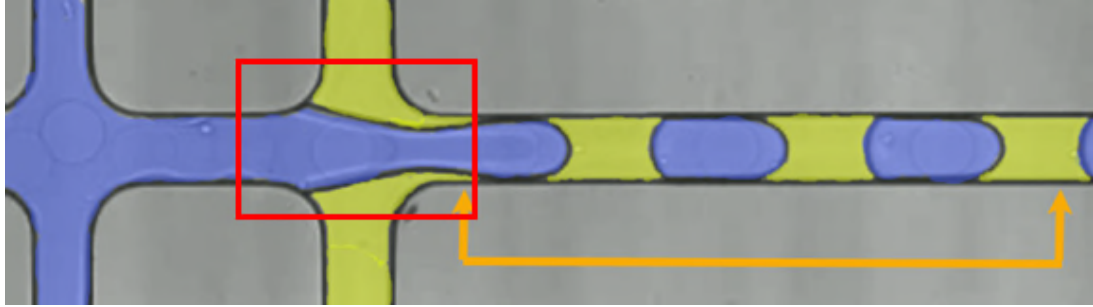
10X GEM 3.34 Schematic (10X1679-000003353) at 3353-3354.

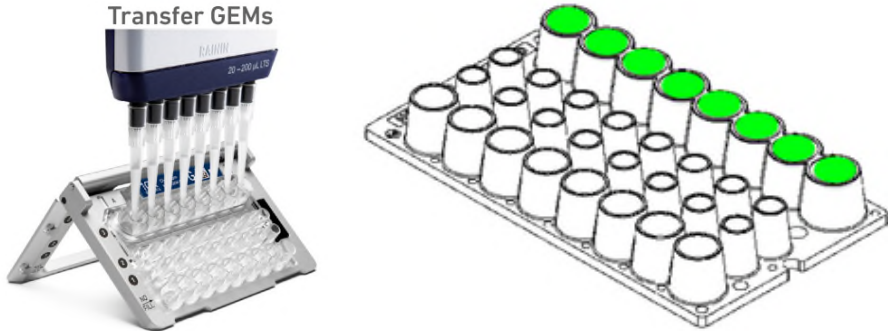


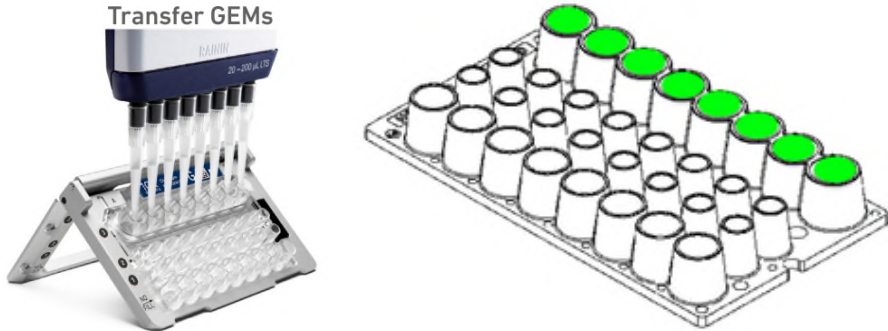
10X GEM U Schematic (10X-000256405) at 405-406.

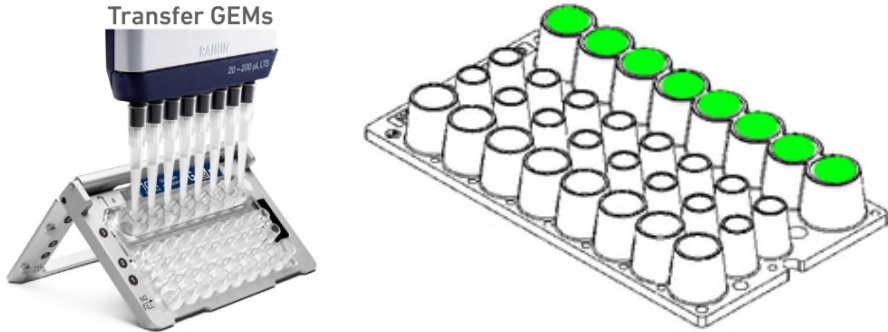
See also Single Cell 3' v3 User Guide (10X1679-000002059) at 2084 (showing pipettes used to "Transfer GEMs" from the separation chamber); Single Cell V(D)J User Guide (10X1679-000002997) at 3027 (showing pipettes used to "Transfer GEMs" from the separation chamber); Single Cell ATAC User Guide (10X1679-000001131) at 1158 (showing pipettes used to "Transfer GEMs" from the separation chamber); Genome User Guide v2 (10X1679-000000679) at 710 (showing pipettes used to transfer GEMs from the separation chamber).

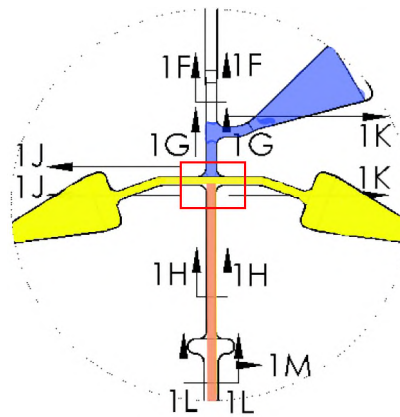
	<p>Within the separation chamber, a plurality of droplets comprising sample are accumulated. <i>See</i> Single Cell 3' v3 User Guide (10X1679-000002059) at 2070 ("It is done by partitioning thousands of cells into nanoliter-scale Gel Beads-in-emulsion (GEMs)."); <i>id.</i> ("GEMs are generated by combining barcoded Single Cell 3' v3 Gel Beads, a Master Mix containing cells and Partitioning Oil."); Single Cell V(D)J User Guide (10X1679-000002997) at 3013 ("It does so by partitioning thousands of cells into nanoliter-scale Gel Beads-in-emulsion (GEMs)."); <i>id.</i> ("GEMs are generated by combining barcoded Single Cell 5' Gel Beads, a Master Mix with cells, and Partitioning Oil on Chromium Chip A.").</p> <p><i>See also</i> Single Cell ATAC User Guide (10X1679-000001131) at 1201 ("This is achieved by transposing nuclei in bulk solution; then using a microfluidic chip, the nuclei are partitioned into nanoliter-scale Gel Beads-in-emulsion (GEMs)."); <i>id.</i> ("GEMs are generated by combining barcoded Gel Beads, transposed nuclei, a Master Mix, and Partitioning Oil on a Chromium Next GEM Chip H.").</p> <p><i>See also</i> Genome User Guide v2 (10X1679-000000679) at 692 ("In the microfluidic Genome Chip, a library of Genome Gel Beads is combined with an optimal amount of HMW template gDNA in Master Mix and partitioning oil to create Gel Beads-in-Emulsions (GEMs)."); <i>id.</i> "Approximately 1.25-1.5 ng (~375 – 450 haploid genome equivalents) of template gDNA is partitioned across over 1 million GEMs.").</p> <p>The volume in the separation chamber is sufficient to separate the plurality of droplets comprising the sample from the immiscible fluid. <i>See</i> Single Cell 3' v3 User Guide (10X1679-000002059) at 2084 ("Slowly aspirate 100 µl GEMs from the lowest points of the recovery wells in the top row labeled 3" after loading "75 µl of Master Mix + Cell Suspension," "40 µl of Gel beads," and "280 µl of Partitioning Oil"); Single Cell V(D)J User Guide (10X1679-000002997) at 3026-3027 ("Slowly aspirate 100 µl GEMs from the lowest points of the recovery wells in the top row labeled 3" after loading 90 µl of "Master Mix + Cell Suspension," "40 µl of Gel beads," and "270 µl of Partitioning Oil"); Single Cell ATAC User Guide (10X1679-000001131) at 1157-1158 ("Slowly aspirate 100 µl GEMs from the lowest points of the recovery wells in the top row labeled 3" after loading "75 µl of Master Mix + Transposed Nuclei," "40 µl of Gel beads," and "240 µl of Partitioning Oil"); Genome User Guide v2 (10X1679-000000679) at 707-709 ("Slowly</p>
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	aspirate 125 µl GEMs from the lowest points of the Recovery Wells" after loading "90 µl Sample Master Mix-denatured gDNA mixture," "85 µl Gel Beads," and "270 µl Partitioning Oil").
Claim 2. The assembly of claim 1, wherein an aqueous fluid from the sample inlet is segmented with an immiscible fluid from the immiscible fluid inlet at the junction.	<p><i>See Claim 1.</i></p> <p>The 10X Double Junction Accused Products literally infringe this element because they include at least one droplet formation module comprising a sample inlet (blue), an immiscible fluid inlet (yellow), and a junction (red square) where aqueous fluid (shown in blue) is segmented with immiscible fluid (shown in yellow) from the immiscible fluid inlet at the junction as shown below and in element 1(c):</p>  <p>10X Double Junction Chip Video (10X-000407436).</p>
Claim 4. The assembly of claim 1, wherein the at least one droplet receiving outlet is located on the upper portion of the separation chamber.	<p><i>See Claim 1.</i></p> <p>The 10X Double Junction Accused Products literally infringe this element because the droplet receiving outlet is located on the upper portion of the separation chamber, which is shown below as the location where the pipette is inserted to remove the "GEMs":</p>

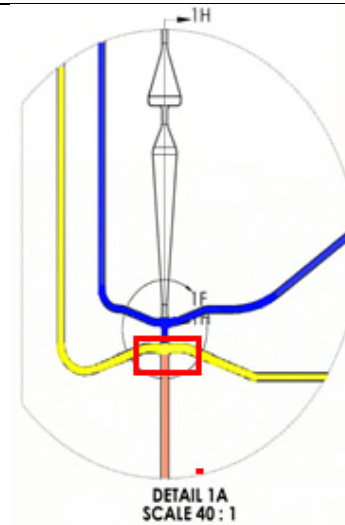
	 <p>Single Cell 3' v3 User Guide (10X1679-000002059) at 2084; 10X GEM 3.34 Schematic (10X1679-000003353) at 3353; <i>see also</i> Single Cell V(D)J User Guide (10X1679-000002997) at 3027; Single Cell ATAC User Guide (10X1679-000001131) at 1158; Genome User Guide v2 (10X1679-000000679) at 710.</p>
<p>Claim 7. The assembly of claim 1, wherein the droplet receiving outlet is coupled to a vessel.</p>	<p><i>See</i> Claim 1.</p> <p>The 10X Double Junction Accused Products literally infringe this element because the droplet receiving outlet is located on the upper portion of the separation chamber, which is shown below as the location where the pipette is inserted to remove the "GEMs":</p>

	 <p>Single Cell 3' v3 User Guide (10X1679-000002059) at 2084; 10X GEM 3.34 Schematic (10X1679-000003353) at 3353; <i>see also</i> Single Cell V(D)J User Guide (10X1679-000002997) at 3027; Single Cell ATAC User Guide (10X1679-000001131) at 1158; Genome User Guide v2 (10X1679-000000679) at 710.</p> <p>The droplet receiving outlet is coupled to a tube strip, which receives the droplets after droplet generation. <i>See</i> Single Cell 3' v3 User Guide (10X1679-000002059) at 2084 ("Over the course of ~20 sec, dispense GEMs into the tube strip on ice."); Single Cell V(D)J User Guide (10X1679-000002997) at 3027 ("Over the course of ~20 sec, dispense GEMs into the tube strip on ice."); Single Cell ATAC User Guide (10X1679-000001131) at 1158 ("Over the course of ~20 sec, dispense GEMs into the tube strip on ice.").</p>
<p>Claim 9. The assembly of claim 7, wherein the vessel is a PCR tube or a test tube.</p>	<p><i>See</i> Claim 7.</p> <p><i>See</i> Claim 7.</p>
<p>Claim 10. The assembly of claim 1, wherein the droplet receiving outlet receives substantially one or more droplets.</p>	<p><i>See</i> Claim 1.</p> <p>The 10X Double Junction Accused Products literally infringe this element because the droplet receiving outlet is located on the upper portion of the separation chamber, which is shown below as the location where the pipette is inserted to remove the "GEMs":</p>

	 <p>Single Cell 3' v3 User Guide (10X1679-000002059) at 2084; 10X GEM 3.34 Schematic (10X1679-000003353) at 3353; <i>see also</i> Single Cell V(D)J User Guide (10X1679-000002997) at 3027; Single Cell ATAC User Guide (10X1679-000001131) at 1158; Genome User Guide v2 (10X1679-000000679) at 710.</p> <p>The droplet receiving outlet receives substantially one or more droplets from the separation chamber following droplet generation. <i>See also</i> Single Cell 3' v3 User Guide (10X1679-000002059) at 2084 ("Slowly aspirate 100 μl GEMs from the lowest points of the recovery wells in the top row labeled 3."); Single Cell V(D)J User Guide (10X1679-000002997) at 3026-3027 ("Slowly aspirate 100 μl GEMs from the lowest points of the recovery wells in the top row labeled 3."); Single Cell ATAC User Guide (10X1679-000001131) at 1157-1158 ("Slowly aspirate 100 μl GEMs from the lowest points of the recovery wells in the top row labeled 3."); Genome User Guide v2 (10X1679-000000679) at 707 ("Slowly aspirate 125 μl GEMs from the lowest points of the Recovery Wells.").</p>
<p>Claim 11. The assembly of claim 1 further comprising a reagent inlet, wherein the reagent inlet is in fluid communication with the junction or the microchannel.</p>	<p>The 10X Double Junction Accused Products literally infringe this element because they include a reagent inlet, highlighted in blue below, which is in fluid communication with the junction (red) and the microchannel (orange):</p>

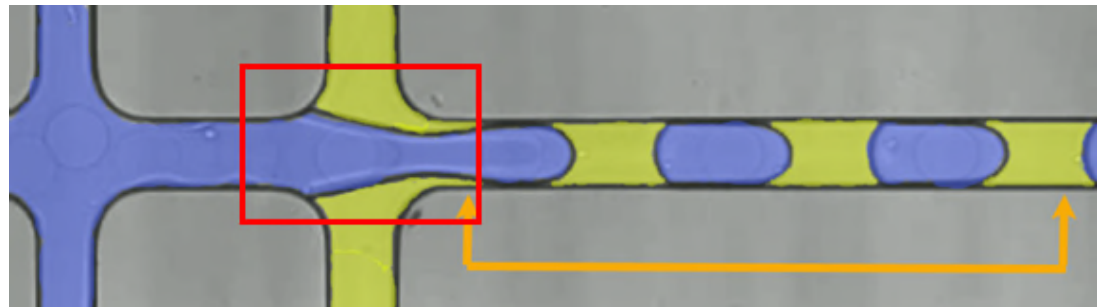


DETAIL 1A
SCALE 50 : 1

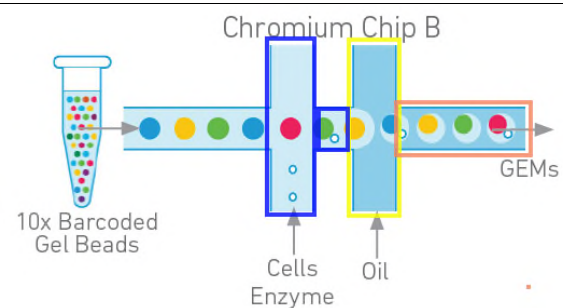


DETAIL 1A
SCALE 40 : 1

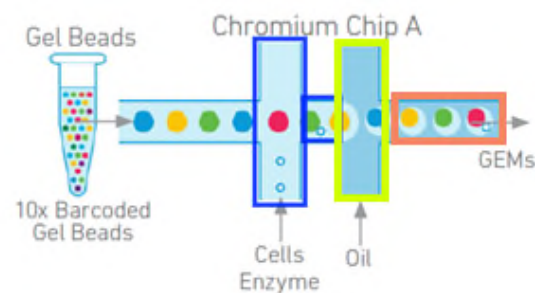
10X GEM 3.34 Schematic (10X1679-000003353) at 3354; 10X GEM U Schematic (10X-000256405) at 406.



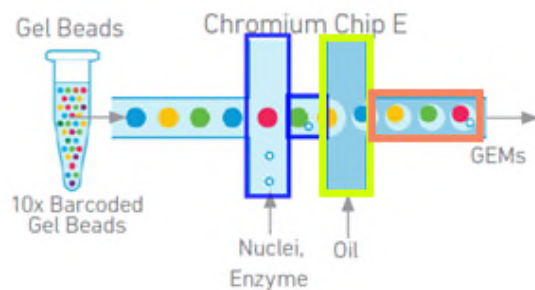
10X Double Junction Chip Video (10X-000407436).



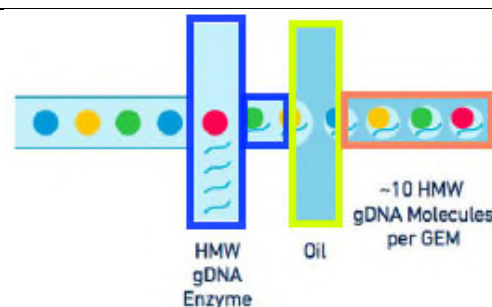
Single Cell 3' v3 User Guide (10X1679-000002059) at 2070.



Single Cell V(D)J User Guide (10X1679-000002997) at 3013.



Single Cell ATAC User Guide (10X1679-000001131) at 1143.



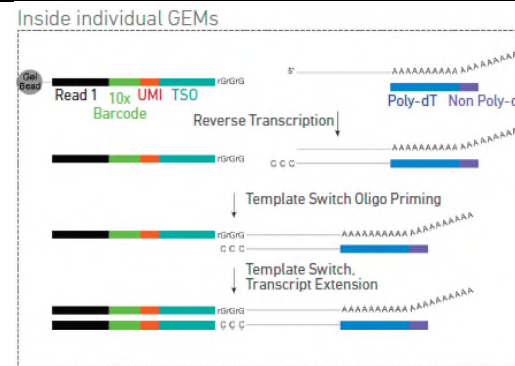
Genome User Guide v2 (10X1679-000000679) at 692.

See also Single Cell 3' v3 User Guide (10X1679-000002059) at 2070 ("GEMs are generated by combining barcoded Single Cell 3' v3 Gel Beads, a Master Mix containing cells, and Partitioning Oil into Chromium Chip B."); *id.* at 2283 ("[A]dd the appropriate volume of nuclease-free water and corresponding volume of single cell suspension to Master Mix for a total of 80 μ l in each tube."); *id.* ("Gently pipette mix the Master Mix + Cell Suspension and using the same pipette tip, dispense 75 μ l Master Mix + Cell Suspension into the bottom center of each well in row labeled 1").

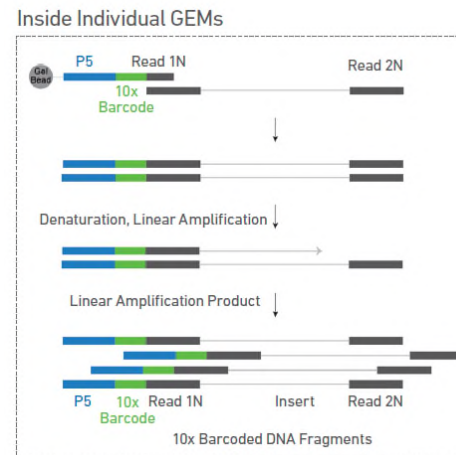
See also Single Cell V(D)J User Guide (10X1679-000002997) at 3013 ("GEMs are generated by combining barcoded Single Cell 5' Gel Beads, a Master Mix with cells, and Partitioning Oil on Chromium Chip A."); *id.* at ("[A]dd the appropriate volume of nuclease-free water first, followed by corresponding volume of single cell suspension to Master Mix for a total of 100 μ l in each tube."); *id.* ("Gently pipette mix the Master Mix + Cell Suspension and using the same pipette tip, dispense 90 μ l into the bottom center of each well in row labeled 1").

See also Single Cell ATAC User Guide (10X1679-000001131) at 1143 ("GEMs are generated by combining barcoded Gel Beads, transposed nuclei, a Master Mix, and Partitioning Oil on a Chromium Chip E."); *id.* at 1157 ("Using the same pipette tip, dispense 75 μ l Master Mix + Transposed Nuclei into the bottom center of each well in row labeled 1").

	<p><i>See also</i> Genome User Guide v2 (10X1679-000000679) at 692 ("In the microfluidic Genome Chip, a library of Genome Gel beads is combined with an optimal amount of HMW template gDNA in Master Mix and partitioning oil to create Gel Bead-in-Emulsions (GEMs)."); <i>id.</i> at 706 ("[S]lowly transfer 90 μl Sample Master Mix-denatured gDNA mixture into the bottom of wells in the row labeled 1.").</p>
Claim 12. The assembly of claim 11, wherein the reagent inlet introduces one or more amplification reagents to the junction or the microchannel.	<p><i>See</i> Claim 11</p> <p>The 10X Double Junction Accused Products literally infringe this element because they include a reagent inlet. <i>See</i> Claim 11.</p> <p>The reagent inlet introduces one or more amplification reactions at the junction into each droplet and allows for amplification to occur within the droplets following droplet generation.</p> <div data-bbox="1037 628 1533 1091" data-label="Diagram"> <p>Inside individual GEMs</p> </div> <p><i>See</i> Single Cell 3' v3 User Guide (10X1679-000002059) at 2071 ("Immediately following GEM generation, the Gel Bead is dissolved, primers are released, and any co-partitioned cell is lysed. Primer containing an Illumina TruSeq Read 1 (read 1 sequencing primer), 16 nt 10x Barcode, 12 nt unique molecular identifier (UMI), and 30 nt poly(dT) sequence are mixed with cell lysate and a Master Mix containing reverse transcription (RT) reagents. Incubation of the Gems produces barcoded, full-length cDNA from poly-adenylated mRNA.").</p>



See also Single Cell V(D)J v1 User Guide (10X1679-000002997) at 3013 ("Immediately following GEM generation, the Gel Bead is dissolved and any co-partitioned cell is lysed. Oligonucleotides containing (i) an Illumina R1 sequence (read 1 sequencing primer), (ii) a 16 nt 10x Barcode, (iii) a 10 nt unique molecular identifier (UMI), and (iv) 13 nt template switch oligo (TSO) are released and mixed with the cell lysate and a Master Mix containing reverse transcription (RT) reagents and poly(dT) RT primers. Incubation of the GEMs produces 10x Barcoded, full-length cDNA from polyadenylated mRNA.").



See also Single Cell ATAC v1 User Guide (10X1679-000001131) at 1143 ("Upon GEM generation, the Gel Bead is dissolved. Oligonucleotides containing (i) an Illumina® P5

	<p>sequence, (ii) a 16 nt 10x Barcode and (iii) a Read 1 (Read 1N) are released and mixed with DNA fragments and Master Mix. Thermal cycling of the GEMs produces 10x barcoded single-stranded DNA. After incubation, the GEMs are broken and pooled fractions are recovered.").</p> <p><i>See also</i> Genome User Guide v2 (10X1679-000000679) at 692 ("Upon dissolution of the Genome Gel Bead in the GEM, primers containing (i) an Illumina R1 sequence (Read 1 sequencing primer), (ii) a 16 bp 10x Barcode, and (iii) a 6 bp random primer sequence are released. Isothermal incubation of the GEMs produces barcoded fragments ranging from a few to several hundred base pairs. After incubation, the GEMs are broken and the pooled fractions are recovered.").</p>
Claim 13. The assembly of claim 12,	<i>See</i> Claim 12.
wherein the one or more amplification reagents are for a polymerase chain reaction.	<i>See</i> Claim 12.