Unified Patent Court
Einheitliches Patentgericht
Juridiction unifiée du brevet

Düsseldorf Local Division
UPC_CFI_140/2024

Decision
of the Court of First Instance of the Unified Patent Court
delivered on 16 June 2025
concerning EP 2 697 391 B1

Headnotes:

As claim construction is a matter of law and the Court must independently construe the claims (UPC_CoA_768/2024, Order of 30 April 2025, Headnote 1 – Insulet Corporation v EOFlow), the first reference to (further) subclaims at the oral hearing may be admissible provided that the feature in question was already in dispute and the subclaims merely provide additional arguments in support of the party's previously expressed position.

Keywords:

Claim construction; patent specification

CLAIMANT:

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DEFENDANT:

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PATENT IN SUIT:

European patent n° EP 2 697 391 B1

PANEL/DIVISION:

Panel of the Local Division in Düsseldorf

DECIDING JUDGES:

The decision is delivered by Presiding Judge Thomas acting as judge-rapporteur, by the legally qualified judge Dr Thom, the legally qualified judge Kupecz and the technically qualified judge Dr Schmidt.

LANGUAGE OF THE PROCEEDINGS: English

SUBJECT OF THE PROCEEDINGS: Infringement action

DATE OF THE ORAL HEARING: 13 May 2025

SUMMARY OF THE FACTS:

1. The Claimant has sued the Defendant for infringement of the European Patent EP 2 697 391 B1 (hereinafter the "patent in suit").

2. The patent in suit was filed in English on 13 April 2012, claiming the priority of GB 201106254 dated 13 April 2011. The patent application was published on 19 February 2014 and the mention of the grant of the patent in suit in Germany, France and Sweden, among others, was published on 30 October 2019. The patent in suit is in force in the aforementioned Contracting Member States. No opposition to the grant of the patent in suit was filed.

3. The Claimant is the proprietor of the patent in suit and all national bundle patents (see Exhibits BP 10 to BP 12).

4. The patent in suit protects a "Method and product for localised or spatial detection of nucleic acid in a tissue sample". Claims 1, 7, 9, 21 and 22 of the patent in suit read as follows:

Claim 1:

"A method for localised detection of nucleic acid in a tissue sample comprising cells, wherein said method comprises:

(a) providing an array comprising a substrate on which multiple species of capture probes are directly or indirectly immobilized such that each species occupies a distinct position on the array and is oriented to have a free 3' end to enable said probe to function as a primer for a primer extension or ligation reaction, wherein each species of said capture probe comprises a nucleic acid molecule with 5' to 3':

(i) a positional domain that corresponds to the position of the capture probe on the array, and

(ii) a capture domain;

(b) contacting said array with a tissue sample and allowing nucleic acid of the tissue sample to hybridise to the capture domain in said capture probes;

(c) generating DNA molecules from the captured nucleic acid molecules using said capture probes as extension or ligation primers, wherein said extended or ligated DNA molecules are tagged by the positional domain or a complement thereof;

(d) optionally generating a complementary strand of said tagged DNA and/or optionally amplifying said tagged DNA;

(e) releasing at least part of the tagged DNA molecules and/or their complements or amplicons from the surface of the array, wherein said part includes the positional domain and all of the sequence that is 3' to the positional domain or a complement thereof;

(f) directly or indirectly analysing the sequence of the released DNA molecules; and

(g) correlating the sequence analysis information to a position in the tissue sample."

Claim 7:

"The method of any one of claims 1 to 6, wherein said complementary strand or said second strand cDNA molecule is generated before or after said tagged DNA molecules

or said cDNA molecules are released from the surface of the array."

Claim 9:

"The method of any one of claims 1 to 8, further comprising the step of amplifying the tagged molecules or cDNA molecules prior to sequence analysis, preferably wherein the amplification step is performed after the release of the tagged DNA or cDNA molecules from the substrate of the array, or wherein the amplification step is performed in situ on the array and/or wherein the step of amplifying comprises a PCR."

Claim 21:

"The method of any one of claims 1 to 13, 15 or 16 or array of claim 14, wherein the array is a bead array."

Claim 22:

"The method or array of claim 21, wherein each species of capture probe is immobilized on a different bead such that each species of capture probe occupies a distinct position on an array substrate."

5. In addition, claim 14 of the patent in suit protects an array which is configured as follows:

"An array for use in the localised detection of nucleic acid in a tissue sample comprising cells, comprising a substrate on which multiple species of capture probes are directly or indirectly immobilized such that each species occupies a distinct position on the array and is oriented to have a free 3' end to enable said probe to function as an extension or ligation primer, wherein each species of said capture probe comprises a nucleic acid molecule with 5' to 3':

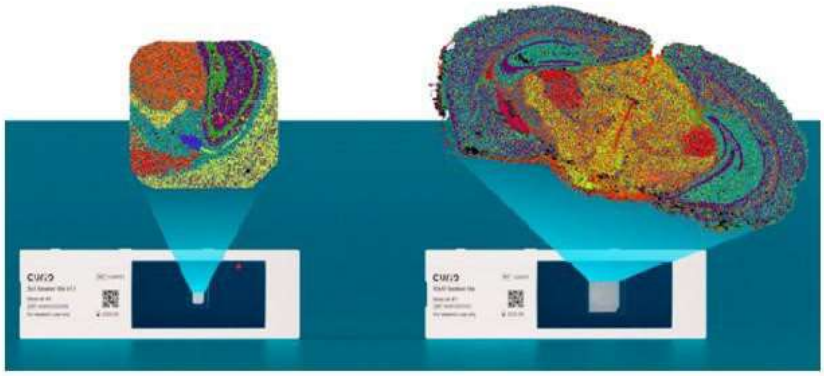
(i) a positional domain that corresponds to the position of the capture probe on the array, and

(ii) a capture domain to capture nucleic acid of a tissue sample that is contacted with said array comprising:

(a) a poly-T DNA oligonucleotide comprising at least 10 deoxythymidine residues and/or a random or degenerate oligonucleotide sequence; or

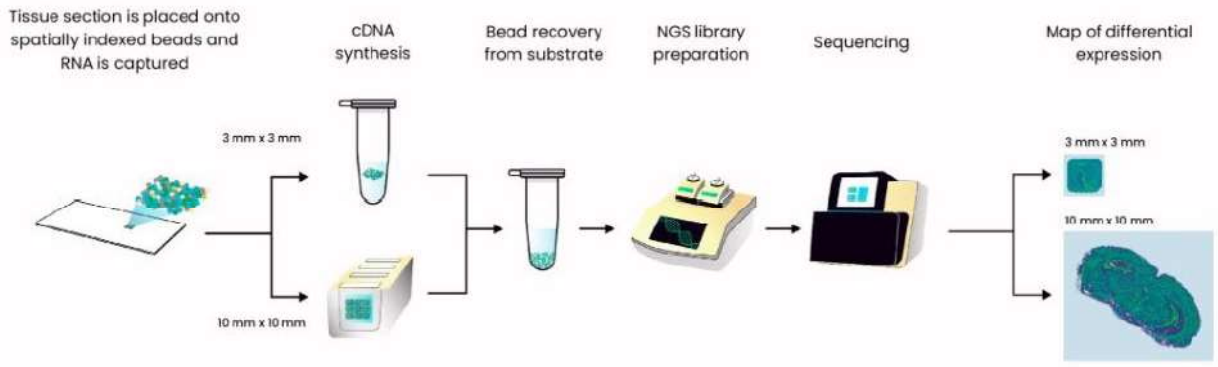
(b) sequences specific for a group of genes."

6. With its infringement action, the Claimant opposes the offer and distribution of the product "Curio Seeker Spatial Mapping KIT", which is available in two different versions (hereinafter: challenged embodiment). As the figures below illustrate, both versions of the challenged embodiment consist of a slide on which there is a tile consisting of spatially indexed beads, the size of the tile being either 3 x 3 mm or 10 x 10 mm (see Exhibit BP 1):



7. Each bead is coated with several oligonucleotides that can hybridise to mRNA via a Poly(dT) region and contain a bead barcode sequence. The barcodes are the same for all oligonucleotides on a bead, but differ from bead to bead.

8. A tissue sample can be analysed using the challenged embodiment. The tissue sample is applied to the tile on the slide, where molecules (RNA) from the tissue sample bind to molecules (capture structures) on the spatially indexed beads. The RNA then undergoes biomolecular processing (is transcribed into cDNA and amplified) and is sequenced using a sequencing device. Sequencing makes it possible to determine which specific RNA molecules were contained in the sample. Finally, each of the RNA molecules is assigned its position in the original tissue sample based on the indices of the spatially indexed beads. This process is illustrated in the following schematic illustration (see SoC, fig. 6):



9. The Defendant offers the challenged embodiment in Germany, France and Sweden, inter alia. In particular, the Defendant supplied the challenged embodiment to the Mannheim Center at the University of Heidelberg in the 37th calendar week of 2023 (11 – 17 September 2023, see Exhibits BP 16 and BP 16a).

10. By brief dated 4 December 2023, the Claimant filed an application for preliminary injunction against the Defendants for alleged infringement of claims 1 and 14 of the patent in suit (ACT_590953/2023; UPC_CFI_463/2023). After an oral hearing, the Düsseldorf Local Division found by order of 30 April 2024 that claim 14 had been infringed. However, no infringement of claim 1 was found. The Düsseldorf Local Division therefore ordered, among others, the following:

I. The Defendant is ordered to refrain from offering, marketing, using, or possessing, for the purposes mentioned, in the territories of the Federal Republic of Germany, the French Republic, and/or the Kingdom of Sweden

an array for localised detection of nucleic acid in a tissue sample comprising cells, comprising a substrate on which multiple species of capture probes are directly or indirectly immobilized such that each species occupies a distinct position on the array and is oriented to have a free 3' end to enable said probe to function as an extension primer, wherein each species of said capture probe comprises a nucleic acid molecule with 5' to 3':

(i) a positional domain that corresponds to the position of the capture probe on the array, and

(ii) a capture domain for capturing nucleic acid of a tissue sample brought into contact with the array, comprising a Poly-T DNA oligonucleotide comprising at least 10 deoxythymidine residues.

II. For each contravention of the above Order, the Defendant shall pay to the Court a penalty payment (which may be repeated) of up to EUR 100,000.00 for each day of the contravention.

III. In all other respects, the application for the ordering of provisional measures is rejected.

11. An appeal filed by the Claimant against this order (APL_27805/2024; UPC_CoA_234/2024) was withdrawn (App_38102/2024).

12. The PI proceedings were initially conducted in German. The President of the Court of First Instance rejected the Defendants request to change the language of the proceedings to English (App_5164/2024). As the Defendant's appeal against this order was successful shortly before the upload of the substantive order (APL_12116/2024, UPC_CoA_101/2024), the Düsseldorf Local Division issued its substantive order in German language, including an English translation.

13. In addition, and to avoid repetition, reference is made to the entire contents of the file and to the record of the oral hearing.

MAIN STEPS OF THE PROCEEDINGS:

14. The present action was brought by the Claimant in German as the language of the proceedings. After the parties have agreed to change the language of the proceedings to English and applied for a change of the language of the proceedings to this language (App_22293/2024 and App_22330/2024), the Düsseldorf Local Division ordered on 29 April 2024 that the proceedings were to continue in English.

15. By order of 3 December 2024, the Düsseldorf Local Division ordered that the Defendant has to provide security for legal costs and other expenses by the Claimant in the amount of EUR 200,000 (App_48598/2024). The Court of Appeal rejected the subsequent application for suspensive effect on 17 December 2024 (App_66516/2024; UPC_CoA_810/2024). The Defendant withdrew its appeal against the order for security for costs on 14 February 2025 (APL_65956/2024; UPC_CoA_805/2024).

INDICATION OF THE PARTIES REQUESTS:

16. The Claimant requests:

A. The Defendant shall be ordered to cease and desist in the territories of the Federal Republic of Germany, the French Republic and/or the Kingdom of Sweden from:

I. offering and/or supplying to third parties in the territory of one or more of the states designated under A. means, specifically arrays, especially "Curio Seeker Spatial Mapping KITs," that are adapted and intended to carry out a method for localized detection of nucleic acid in a tissue sample comprising cells, wherein said method comprises:

(a) providing an array comprising a substrate on which multiple species of capture probes are directly or indirectly immobilized such that each species occupies a distinct position on the array and is oriented to have a free 3' end to enable said probe to function as a primer for a primer extension or ligation reaction, wherein each species of said capture probe comprises a nucleic acid molecule with 5' to 3':

(i) a positional domain that corresponds to the position of the capture probe on the array, and

(ii) a capture domain;

(b) contacting said array with a tissue sample and allowing nucleic acid of the tissue sample to hybridize to the capture domain in said capture probes;

(c) generating DNA molecules from the captured nucleic acid molecules using said capture probes as extension or ligation primers, wherein said extended or ligated DNA molecules are tagged by the positional domain or a complement thereof;

(d) optionally generating a complementary strand of said tagged DNA and/or optionally amplifying said tagged DNA;

(e) releasing at least part of the tagged DNA molecules and/or their complements or amplicons from the surface of the array, wherein said part includes the positional domain and all of the sequence that is 3' to the positional domain or a complement thereof;

(f) directly or indirectly analyzing the sequence of the released DNA molecules; and

(g) correlating the sequence analysis information to a position in the tissue sample

for carrying out the above method in the territory of one or more of the states designated under A. in the territory of one or more of the states designated under A.;

(indirect infringement of claim 1 of EP 2 697 391 B1)

II. offering, placing on the market, utilizing or either importing or stocking for the above purposes an array for use in localized detection of nucleic acid in a tissue sample comprising cells, comprising a substrate on which multiple species of capture probes are directly or indirectly immobilized such that each species occupies a distinct position on the array and is oriented to have a free 3' end to enable said probe to function as an extension or ligation primer, wherein each species of said capture probe comprises a nucleic acid molecule with 5' to 3':

(i) a positional domain that corresponds to the position of the capture probe on the array, and

(ii) a capture domain to capture nucleic acid of a tissue sample that is contacted with said array comprising a poly-T DNA oligonucleotide comprising at least 10 deoxythymidine residues, in the territory of one or more of the states specified under A.

(direct infringement of claim 14 of EP 2 697 391 B1)

B. The Defendant shall be ordered to recall the infringing products under Item A.II. from commercial customers with reference to the patent infringing status established by decision of the Unified Patent Court and with the binding commitment to refund any fees as well as to assume all necessary packaging and transport costs as well as customs and storage costs associated with the recall, and to reclaim the products, where the Plaintiff is to be provided with a sample of the recall letters and a list of the addressees with names and postal addresses – or, at the Defendant's option – a copy of all recall letters, and in this way and/or by exercising retentions of title and/or the termination of long-term obligations and/or exercise of other claims for surrender, to permanently remove products under Item A.II. from the channels of distribution.

C. The Defendant shall be ordered to destroy the infringing products in accordance with Item A.II. at its own expense.

D. The Defendant is ordered to provide the Claimant with information in writing or in electronic form and to provide a written or electronic account (electronically evaluable, e.g. using Microsoft Excel) in an orderly list, including supporting documents namely invoices alternatively delivery notes alternatively receipts, of the extent to which it has committed the acts referred to in A.I. and A.II. since 30 November 2019,

and to specifically detail in each case

1. the individual deliveries pursuant to A.I. and A.II., in each case itemized by the times and prices including invoice numbers and respective model designations, as well as the names and addresses of customers, including retail outlets, for which the products were intended,

2. the individual offers, itemized by offering quantities, times and prices and the respective method designations, as well as the names and addresses of the offerees,

3. the promotions carried out, itemized by advertising media, their circulation, distribution period and distribution area, in the case of Internet advertising the domain, traffic figures and the placement intervals, and in the case of direct advertising, such as circulars, the names and addresses of the recipients,

where the Defendant may retain the right to notify the names and addresses of the offerees and non-commercial customers, instead of to the Plaintiff, to a certified accountant to be designated by the Plaintiff and sworn to confidentiality who is domiciled in Germany, provided that the Defendant bears the associated costs and obligates him at the same time to communicate to the Plaintiff upon specific request whether a particular offeree or non-commercial customer is contained in the rendering of accounts provided.

E. The Defendant shall be ordered to compensate the Plaintiff for any damage caused and still being caused by the acts carried out under Items A.I. and A.II. subsequent to 30 November 2019.

F. The Claimant is authorized, at the Defendant's expense, to display the decision and to publish it in full or in part in five public media and trade journals of its choice, and in particular on the internet, on the websites operated by the Claimant.

G. In the event of failure to comply with the order under Item A., the Defendant shall make a (if applicable periodic) penalty payment to the Court of up to EUR 100,000 for each day of failure to comply.

H. The Defendant must reimburse the costs of the proceedings.

I. The judgment shall be directly enforceable. In the event that the provision of security is ordered, the Plaintiffs shall be permitted to also provide this in the form of a deposit and also in the form of a bank or savings bank guarantee.

17. To the extent that the Claimant drafted “particular if” motions based on sub claims 2 to 11, 21 and 22, reference is made to the Statement of Claim.

18. The Defendant requests that,

    I. the infringement action be dismissed;

    II. the Claimant bears all legal costs and other expenses incurred by the Defendant;

    III. in the alternative, any decision and order granted by the Court to the Claimant is subject to the rendering of security by the Claimant to the Defendant in an amount no less than the value of the action;

    IV. further in the alternative, any costs decision takes into account Defendant's costs of the Application for the change of language of proceedings and Curios (withdrawn) appeal of the Order of 30th April 2024 in UPC_CFI_463/2023 (herein "Order");

    V. set the value of the dispute at EUR 60,000.

POINTS AT ISSUE:

19. The Claimant considers the offer and sale of the challenged embodiment in Germany, France and Sweden to be a direct (claim 14) or indirect (claim 1) infringement of the patent in suit. In its opinion, the method used by means of the challenged embodiment for the detection and localisation of nucleic acids literally implements all the features of claim 1. It is based on the "Slide-seq" method, which is described in the "Science" and "nb" articles submitted as Exhibits BP 5 and BP 6.

20. The Claimant argues, that the array is not required to remain intact throughout all steps of the claimed workflow. Rather, the ordered structure of the probes is required during the "transfer" part of the workflow, as shown in Figure 1 of the patent in suit. This is sensible because in the course of the transfer part of the method, the ordered structure, which provides a distinct position for each capture probe, is imperative.

21. According to the Claimant, neither the language of claim 1 nor the specification provides that it is imperative that the connection between the separate elements that build up the array stay connected during the storage part of the method.

22. Figure 1 leaves it open, and thus at the discretion of the person skilled in the art, whether the storage part (reverse transcription) takes place on the intact array or not. In particular, the alleged requirement of an intact array at the time of the release is, according to the Claimant, not established in a case where the array is formed of elements which can be easily separated without any interference with the substance of the single elements, as in the case of an array made of beads.

23. Furthermore, the Claimant asserts that the term "array" is used broadly in the patent in suit as a term to designate the physical object to which the nucleic acid probes are immobilised during parts of the workflow, without requiring that the array remain ordered during the entire workflow. Consistent with this broad meaning, the term "array" is used throughout the claims of the patent in suit as a reference object and to provide an antecedent basis. For

example, claim 13 provides a method comprising immobilising capture probes on an “array substrate”. The use of the term “array substrate” is similar in paras. [0047], [0054], [0178] and [0179]. In par. [0055], the term “array” is used to refer to the reference object to which capture probes or surface probes bind. Furthermore, in par. [0059] the term “array probes” is used to designate probes that are used in the context of the invention that can be immobilised on a substrate to form an array. However, the probes themselves, prior to immobilisation, do not occur in an ordered fashion per se. Cf. para. [0089] et. seqq. teach the synthesis of capture probes on the “array substrate”. In these paragraphs, the term “array” is used repeatedly throughout the described processes.

24. Insofar as claim 1 requires that a positional domain corresponds to the position of a capture probe on the array, it is sufficient, in the view of the Claimant, that each capture probe can be assigned to a distinct position on the array. In particular, from a technical/functional point of view, it is not decisive whether the capture probes (positional domains) are attached to a predefined position on the array or whether the position of the attached capture probes is determined after their attachment. Rather, it is decisive that the positional domain can be assigned to its original position on the array by analysis at the end of the process.

25. With regard to step (e) in claim 1, according to which at least a part of the tagged DNA molecules and/or their complements or amplicons are released from the surface of the array, said part includes the positional domain and all of the sequences that is 3’ to the positional domain or a complement thereof, the Claimant states that the sole purpose of this feature is to provide the storage nucleic acid molecule that has been generated in the previous steps (transfer/storage) in a way that is suitable for the readout or analysis step. In order to fulfil this purpose, it is (only) necessary that (i) at least a part of the storage nucleic acid molecule is separated from the physical object to which it is attached and that allowed for the first molecular biological method steps to be conducted and (ii) this part of the storage nucleic acid molecule comprises the positional tag (information localisation) and the sequence of the nucleic acid to be detected (information for detection). Item (i) is necessary to enable readout by methods which require free floating molecules as analyte and item (ii) to make sure that neither of the information that is stored in the storage nucleic acid molecule is lost. In view of these requirements, the skilled person concludes that (a) the array must be kept in an ordered form for as long as is necessary to transfer and store the information on the localization of the nucleic acid analytes into the storage nucleic acid molecules and (b) that the release must take place prior to readout.

26. Furthermore, according to the Claimant, it is sufficient that complements or amplicons of the tagged DNA molecules are released. Having regard to the specification, the skilled person understands that the release can be achieved in the course of the amplification process by denaturing a double-stranded nucleic acid molecule.

27. During the oral hearing, the Claimant referred to subclaims 7 and 9 for the first time. According to the Claimant, interpreting claim 1 in a way that the release must take place from the surface of an intact array would result in a situation where at least two of the embodiment protected by subclaims 7 and 9 would not be covered by claim 1.

28. On the basis of such a scope of protection, the Claimant is of the opinion that the challenged embodiment infringes the patent in suit.

29. In the method used by Defendant's customers, each capture probe on the tiles has a positional domain corresponding to its position on the array. This positional domain is the "bead barcode". The barcode of the capture probes located on a bead are identical to each other and can each be assigned to the original position of the bead within the array by an "individual text file that reports the results of sequencing that specific tile". According to the Claimant, it does not lead out of the scope of protection of claims 1 and 14 if the capture structures also comprise a unique molecular identify (UMI) that varies between capture structures (capture probes) on the same bead (position).

30. In the view of the Claimant, on a correct claim construction, releasing step (e) of claim 1 is realized. Whether the bead surfaces are to be considered as the surface of the array is a matter of claim construction.

31. According to the Defendant, an array requires an ordered arrangement of parts. The patent in suit discusses the meaning of "array" in several places, all of which involve an ordered arrangement.

32. Insofar as claims 1 and 14 require a positional domain corresponding to the position of the capture probe on the array, it should be noted that claims 1 and 14 already require that the positional domain enables the assignment of a capture probe to a specific position or feature on the array ("a substrate on which multiple species of capture probes are directly or indirectly immobilised such that *each species occupies a distinct position on the array*.") Because each species comprises a positional domain, and because each species occupies a distinct position on the array, the capture probes already enable the assignment of a capture probe to a specific position or feature on the array. Therefore, the "corresponds to" feature must provide an additional limitation. As the Defendant points out, part of the supposed technical advance of the patent in suit is that the capture probes, comprising positional domains can be applied at specific positions on an array, as by printing, so that the location and sequence can be associated in a fixed arrangement. This fixed arrangement, i.e. the predetermined location of positional domains on the array, is the meaning of the requirement in the claims, that a positional domain "corresponds to" a location on the array. When describing the invention in general terms, the patent in suit indicates that there is necessarily a pre-determined relationship between the positional domain and a location on the array. In other words, to achieve the claimed method, positional domains must be associated with specific predetermined positions. According to the Defendant, the examples of the patent in suit consistently disclose that "corresponds to" is a functional requirement of the positional domain. Even if the patent in suit leaves the method of positioning open to the skilled person in general terms, the claims recite the additional requirement that the positional domain "corresponds to" a position, requiring further claim construction. This should be done using the description and the drawings, which make clear that "corresponds to" requires a predetermined relationship between the positional domain and its location on the array. An interpretation of "corresponds to" as merely requiring that the positional domain occupies any specific location on the array would render the patent in suit invalid for lack of novelty over WO 2012/048341 ("Harvard") and for insufficiency under Art. 83 EPC, because the patent in suit does not enable any other method by which the bar codes of the capture probes can be assigned to the original position of the bead on the array.

33. With regard to the release step included in claim 1 (step e)), the Defendant is of the opinion that it requires that the surface of the array be present at the time the release step is

performed. This feature requires the presence of the same ordered arrangement of oligonucleotides that was initially provided in step a). It is therefore necessary for the array to persist between steps a) and e). According to the Defendant, this is the natural reading of claim 1 and is supported by the definitions of "array" in the description. Furthermore, step e) should be interpreted as requiring release by cleavage, otherwise the patent in suit would violate Art. 123(2) EPC.

34. Based on this understanding of the scope of protection, the challenged embodiment does not, according to the Defendant, make use of the invention protected by claims 1 and 14.

35. According to the Defendant, each bead is coated with multiple oligonucleotides capable of hybridising to mRNA via a poly(dT) region and containing a bead barcode sequence. The barcodes are the same for all oligonucleotides on a single bead, but differ between beads. In addition, the bead-based technology in the tiles of the kit means that, statistically, each tile contains duplicate beads that carry the same barcodes as each other. The presence of duplicates occurs even in the 3mm tile, but is much more common in the 10mm tile. In addition to the bead barcode sequence, the beads of the kit include a UMI portion ("Unique Molecular Index"). Each individual bead in the kit has multiple oligonucleotides attached to it, and, although the bead barcode sequence in each of these oligonucleotides is identical for a particular bead, the UMI sequence is different. If a bead has 100 attached oligonucleotides, they will have the same bead barcode sequence but will have 100 different UMI sequences.

36. On this basis, the Defendant asserts that the challenged embodiment does not infringe method claim 1 and array claim 14.

37. While the patent in suit relates to ordered arrays of oligonucleotide sequences that are "printed" onto the substrate in a defined, pre-determined configuration, such that unique sequences correspond to specific positions on the array, the beads in the challenged embodiment are randomly distributed. In addition, to facilitate analysis of the array after hybridisation of the sample, the claimed method includes a step in which the oligonucleotide sequences are released from the array surface to allow downstream processing in solution face (e.g. sequencing). In the challenged embodiment, the array is destroyed before any cDNA is released. Moreover, according to the Defendant, the patent in suit relates to arrays in which the oligonucleotides are printed in a predefined configuration, where the patent in suit requires that the positional domains correspond to their location on the array. In contrast, the challenged embodiment is based on a fundamentally different technology in which the barcodes do not correspond to a given position on the array at all. A given barcode will be in different positions in different tiles. Each kit is to be used with the individual text file reporting the results of sequencing that particular tile.

38. The Defendant further contends that steps f) and g) of claim 1 are key steps requiring analysis of the sequence of the released molecules and correlation of the sequence analysis information with a position in the tissue sample. The Defendant accuses the Claimant of failing to provide evidence that these steps are carried out in France, Germany or Sweden. The Defendant asserts that it is highly likely that these steps are not carried out in the countries where the samples are collected, as many projects in this field are carried out by multiple research institutes around the world and it is most likely that the data is gathered and processed either in the cloud or by a party elsewhere in the world. Therefore, the Defendant considers that the double territoriality requirement of Art. 26 UPCA is not

fulfilled.

39. In the alternative, the Defendant seeks security for compensation. In support of its request, the Defendant argues that it has been subject to a preliminary injunction since May 2024, which has halted its activities relating to its main product in Germany, France and Sweden. The Defendant asserts that any further injunction will worsen the irreparable damage already caused to the Defendant. The Defendant needs the compensation to be paid as soon as possible after the lifting of any injunction in order to minimise the continuation of irreparable harm and to ensure that it has immediate funds to continue and restart its business in Germany, France and Sweden. Conversely, any delay in enforcing an award of compensation will result in continued damage to the Defendant. The risk of delay is further increased by the fact that the Claimant is a US company, which means that enforcement of an award will take longer.

40. The Claimant contests the Defendant's assertion that "the tiles include duplicate beads which carry the barcodes to each other" by pleading ignorance. It states that the occurrence of such duplicates in every practical scenario and on any tile of the infringing products would have a negative impact on the accuracy of the analysis result, so that the Defendant will do its utmost to avoid the occurrence of duplicates. In addition, in order to ensure a clear assignment and thus a correct result, the Defendant must, in the step where it assigns the information on the positional domain to a position within the array, remove the information on the possible duplicates from the file which is used by the Defendant's customers to assign the individual analysis results to the original position on the array. Otherwise, the results will be distorted.

41. Insofar as the Defendant asserts with regard to steps f) and g) that "data is gathered and processed either in the cloud or by a third party elsewhere in the world", i.e. outside of the UPC Member States, the Claimant disputes this assertion on the plea of ignorance. If individual steps of the use of a method are realized outside of the UPC Member State, this constitutes a patent infringement in the UPC Member States if the method steps carried out outside of the UPC Member States can be attributed to the party who realizes the remaining method steps in the UPC Member States. In the present case, all the method steps requiring a physical action are carried out in Germany, France or Sweden. Even if the remaining steps f) and g) are, according to the Defendant's allegations, only partly carried out abroad cloud-based. The sequence analysis relates to DNA molecules that are physically present in Germany, France or Sweden. The correlation of sequence analysis information and position also relates to an object, the tissue sample, which is present in Germany, France or Sweden. According to the Defendant, the only thing that is carried out in a cloud-based manner are IT-supported calculations on the basis of data that is generated in Germany, France or Sweden to analyse a physical object (tissue sample) that is also present in those countries. Such simple calculations as in the present case are, according to the Claimant, neither essential nor specific to the invention. The entire performance of the method is such that it is consciously and purposefully directed to the examination of the samples located in Germany, France or Sweden and to the use of the identification result at the location of the samples, i.e. in Germany, France or Sweden. The result of the cloud-based calculation must therefore, for technical reasons, be attributed to the samples located in Germany, France or Sweden.

42. The Claimant has objected to the request for security.

43. On the question of duplicates, the Defendant has submitted in its Rejoinder (see p. 20) a numerical analysis of 2528 tiles. According to the Defendant, all the tiles analysed showed duplicates. The analysis shows that there were 397 duplicates on a 10x10 tile (mean) and 31 duplicates on a 3x3 tile (mean). These duplicates use the same barcode sequence. The duplicate sequences are also randomly distributed.

44. In addition, reference is made to the submissions of the parties and the recording of the oral hearing.

GROUNDS FOR THE DECISION:

A. Admissibility of the infringement action

45. The infringement action is admissible. In particular, the Düsseldorf Local Division has international jurisdiction pursuant to Art. 31 UPCA in conjunction with Art. 71b(2), Art. 7(2) of Regulation (EU) No 1215/2012 (Brussels Ia Regulation). Pursuant to Art. 32(1) UPCA, the Unified Patent Court also has exclusive jurisdiction in actions for actual or threatened infringement of European Patents, unless an opt-out has been declared (Art. 83(3) UPCA). Furthermore the Defendant did not file a preliminary objection within the one month period stipulated in R. 19.1 RoP, both the jurisdiction of the Unified Patent Court and the jurisdiction of the Düsseldorf Local Division are deemed to be accepted, R. 19.7 RoP.

B. Relevant person skilled in the art

46. The skilled person is a molecular biologist with several years' experience in gene sequencing and familiarity with microarrays.

C. Scope of the patent in suit

47. The invention relates to the localised or spatial detection of nucleic acid in a tissue sample.

48. In terms of state of the art, the document of the patent in suit first describes possibilities for nucleic acid analysis (para. [0005] to [0009]), which are subdivided into *in vitro* techniques on the one hand and *in situ* techniques on the other (para. [0009] f.).

49. *In vitro* techniques that require the extraction of proteins or nucleic acids from a sample such as whole tissue samples, single cell types, or even single cells lead to the loss of spatial context information. These techniques include the VP Elisa (enzyme-linked immunosorbent assay), qPCR (quantitative polymerase chain reaction), (micro) assays and RNA sequencing, including NGS ("next-generation sequencing") technologies (para. [0010] f., [0016] - [0019]). These examination methods usually also result in average values being determined for a large number of cells from a tissue. At the priority date, methods for sampling smaller tissue areas or individual cells for analysis were generally labour-intensive, costly and had low precision (para. [0011] f.). Array technology was developed to analyse genes in parallel. The "next-generation DNA sequencing analyses" developed around 2009 make it possible to carry out genomic studies at much lower costs and quicker (Abs. [0016] - [0019]). An approach described by Tang et al. (Nat Protoc 2010, 5: 516-35) and Wang & Bodovitz (Trends Biotechnical 2010, 28: 281-90) for global gene expression analysis enables very precise

analysis of cell-cell variations, but not high-resolution, high-throughput studies in intact tissues [0012]).

50. The patent in suit mentions *in situ* hybridisation (para. [0008]) as a possibility for the *in situ* study of gene expression in which the contextual information of the tissue is retained. However, such *in situ* methods have the disadvantage that they can only be used to analyse one or a few nucleic acids (e.g. for a tissue section) (para. [0013]).

51. The patent in suit is therefore based on the task of providing transcriptomic information with spatial resolution in order to enable global gene expression analysis in tissue samples (cf. para. [0013]).

52. In order to solve this task, the patent in suit protects, in claim 1, a method having the following features:

1.1. A method for localised detection of nucleic acid in a tissue sample comprising cells, wherein said method comprises:

1.2. (a) **providing an array** comprising a substrate,

1.2.1. on which multiple species of capture probes are directly or indirectly immobilized such that each species occupies a distinct position on the array and

1.2.2. is oriented to have a free 3' end to enable said probe to function as a primer for a primer extension or ligation reaction,

1.2.3. wherein each species of said capture probe comprises a nucleic acid molecule with 5' to 3':

1.2.3.1. (i) a positional domain that corresponds to the position of the capture probe on the array, and

1.2.3.2. (ii) a capture domain;

1.3. (b) **contacting said array with a tissue sample**

1.3.1. and allowing nucleic acid of the tissue sample to hybridise to the capture domain in said capture probes;

1.4. (c) **generating DNA molecules from the captured nucleic acid molecules** using said capture probes as extension or ligation primers,

1.4.1. wherein said extended or ligated DNA molecules are tagged by the positional domain or a complement thereof;

1.5. (d) optionally generating a complementary strand of said tagged DNA

1.5.1. and/or optionally amplifying said tagged DNA;

1.6. (e) **releasing at least part of the tagged DNA molecules**

1.6.1. and/or their complements or amplicons from the surface of the array,

1.6.1.1. wherein said part includes the positional domain and all of the sequence that is 3' to the positional domain or a complement thereof;

1.7. (f) **directly or indirectly analysing the sequence** of the released DNA molecules; and

1.8. (g) **correlating the sequence analysis information** to a position in the tissue sample.

53. The array protected by claim 14 has the following features:

14.1. An array for use in the localised detection of nucleic acid in a tissue sample comprising cells,

14.2. comprising a substrate

14.2.1 on which multiple species of capture probes are directly or indirectly immobilized such that each species occupies a distinct position on the array and

14.2.2. is oriented to have a free 3' end to enable said probe to function as an extension or ligation primer,

14.3. wherein each species of said capture probe comprises a nucleic acid molecule with 5' to 3':

14.3.1 (i) a positional domain that corresponds to the position of the capture probe on the array, and

14.3.2. (ii) a capture domain to capture nucleic acid of a tissue sample that is contacted with said array comprising

14.3.2.1. (a) a poly-T DNA oligonucleotide comprising at least 10 deoxythymidine residues and/or

14.3.2.1.1. a random or degenerate oligonucleotide sequence; or

14.3.2.2. (b) sequences specific for a group of genes.

54. According to Art. 69 EPC in conjunction with the Protocol on its interpretation, the claim is not only the starting point but also the decisive basis for determining the scope of protection of a European Patent. The interpretation of a claim does not depend solely on its precise wording in the linguistic sense. Rather, the description and the drawings must always be taken into account as aids to the interpretation of the claim and not only to resolve any ambiguities in the claim. This does not mean, however, that the claim only serves as a guideline and that its subject-matter also extends to that which, after examination of the description and drawings, appears to be the protection sought by the patentee (UPC_CoA_335/2023, Decision of 26 February 2023 in conjunction with Decision of 11 March 2024, headnote 2 and para. 73 - 77 – NanoString v 10x Genomics; UPC_CoA_1/2024, Decision of 13 May 2024, mn. 26 – VusionGroup v Hanshow; UPC_CoA_768/2024, Order of 30 April 2025, mn. 37 – Insulet v EOFlow).

55. Having that said, some features need explanation.

I. Claim 1

1. Introduction

56. As the Court has already stated in the previous PI proceedings, claim 1 protects a method for the localised detection of nucleic acid in a tissue sample comprising cells. If such localised detection is to be used to localise the RNA or DNA to its native position or location (para. [0032]), it is clear that the morphological structure of the tissue sample must be intact (cf. also para. [0012] "However, high throughput methods to study transcriptional activity with high resolution in intact tissues have not, until now, been available.", emphasis added). Only then, as envisaged by the invention, can the expression profiles or the location/distribution pattern of the expressed genes or the genome sequences be determined (cf. para. [0002]). In other words, it is precisely where a nucleic acid is located in a sample relative to other nucleic acids or to other native structures in the sample that is important. That this is the case is confirmed to a person skilled in the art by paragraphs [0013] f. of the description of the patent in suit: the method according to the invention is intended to enable global gene expression analysis in tissue samples which provides transcriptomic information with spatial resolution. The aim is to obtain transcriptional information in a sample while retaining the positional information for each transcript.

57. Nothing to the contrary follows from the paragraphs [0097] f. of the description of the patent in suit. Although the tissue sample to be analysed may be a collection of individual blood cells or other cell suspensions, the relevant passage explicitly states, "cells that do not interact directly, or are not present in a tissue context." (emphasis added). It therefore appears questionable whether single cells are actually a "tissue sample" within the meaning of the claim. Even if this were the case, such an examination of single cells according to the invention in any case serves to localise the RNA or DNA at their original position in these cells (cf. para. [0032] and [0097], last sentence), which presupposes that their structure is still intact at the time of the examination. Only then are such cells suitable tissue samples within the meaning of the patent in suit.

2. Feature group 1.2.

58. As a person skilled in the art will be able to see from claim 1, the method for which protection is sought includes as a first step “providing” an array comprising a substrate. Feature group 1.2. does not contain further method steps that go beyond such provision; rather, feature group 1.2. is limited to the description of the more detailed technical design of the substrate. As long as the array provided complies with the spatial-physical requirements mentioned in feature group 1.2., the feature is realised, irrespective of how and above all using which process this spatial-physical design was created.

59. Based on this, the substrate of the array is characterised by the fact that it has on it multiple species of capture probes which are directly or indirectly immobilized on the substrate, where each species occupies a distinct position on the array (feature 1.2.1.). Insofar as the German version of the claim, in contrast to the English version, speaks of a "different" (“unterschiedlichen”) position on the array, the English version prevails. The patent in suit

was granted in the English language of proceedings. Therefore, the English version of the claim is the binding version in each Contracting Member State (Art. 70(1) EPC).

60. In order for the capture probes to act as primers for a primer extension or ligation reaction, they are orientated so that they have a free 3' end (feature 1.2.2.), whereby they have a position domain and a capture domain (feature group 1.2.3.) when viewed from 5' to 3'. The positional domain corresponds to the position of the capture probe on the array (feature 1.2.3.1.). It therefore enables the assignment of a capture probe to a specific position or feature on the array. The capture domain can selectively bind to a nucleic acid strand and is selected or designed accordingly (see also paragraphs [0063] - [0067] of the description of the patent in suit).

61. As the Court has also already established in the PI proceedings, claim 1 does not deal with the question of achieving such an arrangement. The only decisive factor is therefore that, at the time of providing the array, the capture probes are arranged as described in feature group 1.2. and are thus in particular directly or indirectly immobilised in such a way that each species occupies a unique position on the array, to which the positional domain corresponds. Put simply, each species must therefore be in a unique position at the time the array is provided (see also para. [0069] - [0071]). As long as this is ensured, claim 1 leaves it to the person skilled in the art to decide whether to ensure such positioning of the capture probe by firstly, as in the case of the printing methods described in paragraphs [0217], [0268], [0348] and [0351], determining the desired position on the array and then placing the capture probes there or, alternatively, by initially distributing the capture probes at random on the array and only subsequently determining their position. If such linking of position and capture domain takes place before the provision of the array, each species occupies a unique position at the time of providing the array, as required by features 1.2. and 1.2.1.

62. Why unique positioning of this kind is required will become clear to a person skilled in the art when considering the last steps of the method protected by claim 1: in order to permit the localised detection of nucleic acids, which is the purpose of the invention (cf. para. [0001]), it is crucial that the positional domain which is read out can be assigned to its original position on the array during the analysis at the end of the method. To ensure this, each species should occupy a predefined position on the array at the time of provision of the array and be (directly or indirectly) immobilised in this position. The time at which this determination is made prior to the provision of the array is irrelevant for the subsequent position evaluation.

63. Insofar as the Defendant refers to the fact that the words “distinct” and “corresponds to” are not given any own meaning and are factually negated in such an understanding, which is why the wording of the feature “that corresponds to the position” requires that a connection already exists, does this not contradict the above statements. Feature 1.2.1. requires that multiple species of capture probes are directly or indirectly immobilized such that each species occupies a distinct position on the array. According to feature 1.2.3.1., a positional domain that corresponds to the position of the capture probe on the array. However, both requirements refer to a (finished) array. There, they must have a distinct position. Nothing is said about how this is achieved. As already explained, this can be done by first specifying a position at which the domain is then ordered. However, a domain is also at a particular position if the domain is first applied (before the array is provided) and then mapped. In the latter method, there is also an array on which multiple species of capture probes are directly

or indirectly immobilized such that each species occupies a distinct position on the array. This provides the starting point for step a) of the method according to claim 1. The provision of the array itself is not the subject matter of the invention. Against this background, it is also harmless that the latter method is not mentioned in the description of the patent in suit. Similarly, it is not decisive for the scope of protection that the description of the patent in suit primarily deals with printed arrays. The scope of protection is determined by the claim (Art. 69 EPC). The claim does not specify how to produce an array as defined in feature group 1.2., but simply requires, as stated, that an array with the described characteristics be provided in the first step of the claimed process. Unlike claim 13, claim 1 does not protect a "method for producing an array".

64. Against this background, it is also irrelevant, why claims 21 and 22, which deal with bead arrays, were included in the patent in the EPO proceedings. Claim 1 does not contain any specifications as to the detailed design of the array beyond the requirements set out in feature group 1.2. If these requirements are met, a bead array falls within the scope of protection, regardless of whether and for whatever reason it is mentioned in a subclaim.

65. As long as the Defendant states that an interpretation of "corresponds to" as merely requiring that the positional domain occupies any specific location on the array would render the patent in suit invalid for lack of novelty under Art. 54(4) UPCA over WO 2012/048341 ("Harvard"), it needs to be noted that, pursuant to Art. 69(1) S. 1 EPC, the extent of the protection conferred by a European Patent shall be determined by the claims. It is therefore the claim that defines the outer limit of the scope of protection. Nevertheless, the description and the drawings shall be used to interpret the claims. Prior art is not mentioned there. The limitation to the description and the drawings as interpretation material serves the purpose of legal certainty, since the scope of protection can be conclusively determined from the patent itself. This does not mean that prior art is irrelevant to the definition of the scope of the patent and thus to claim construction. If this prior art is discussed in the description of the patent in suit, the relevant considerations must be taken into account. If the patent distinguishes itself from the prior art in a particular way, an interpretation that negates that distinction must be avoided (UPC_CFI_373/2023 (LD Düsseldorf), Decision of 31 October 2024, headnote 2 – SodaStream v Aarke). However, the prior art document cited by the Defendant is not mentioned in the patent in suit. Therefore, it cannot be taken into account for determining the scope of protection. The validity of the patent in suit has not been challenged in the proceedings on the merits. In particular, the Defendant did not file a counterclaim for revocation.

3. Feature group 1.6.

66. The Court has already dealt with feature group 1.6. in detail in the PI proceedings and explained that this feature group requires the release of at least part of the tagged DNA molecules from the surface of the array, wherein the (released) part includes the positional domain and the entire sequence that is 3' to the positional domain, or a complement thereof.

67. If at least part of the tagged DNA molecules are to be separated from the surface of the array (emphasis added), it is clear that both parts of DNA molecules and a surface of the array, which are separated from each other, must be present at the time of separation. However, nothing is said about the question of the constitution of such a surface or surface structure. In particular, claim 1 does not require the surface of the array to remain unchanged

throughout the method, nor does it require the surface to be completely intact at the time of release.

68. A person skilled in the art, attempting to deduce therefrom the scope of feature group 1.6., will therefore turn to the description of the patent in suit. There, para. [0143] discloses that in the release step DNA is removed from the array, wherein this DNA includes the positional domain (or its complement). If this condition is met, it will be possible to obtain sequence analysis data which can be correlated with the various regions in the tissue sample. Thus, in order to obtain the information sought by the method according to the invention about the distribution, location or expression of genomic sequences in a tissue sample while maintaining the spatial pattern of expression, distribution or location (see para. [0002]), it is crucial that the linkage of DNA and positional domain is maintained. From a functional point of view alone, it is therefore crucial that the array remains intact as long as and only to the extent that a DNA molecule has been synthesised which comprises the position domain and the sequence of the analyte. In addition, paragraph [0144] of the description of the patent in suit clarifies that the release step may comprise a separation of a DNA molecule from the array. However, nucleic acid cleavage is not required, as DNA can also be released by denaturation of a double-stranded molecule. Accordingly, a DNA molecule can be released by nucleic acid cleavage and/or by denaturation (para. [0144]).

69. Nevertheless, the person skilled in the art must not stop at such purely functional considerations.

70. Art. 69 EPC should not be understood to mean that the claims serve only as a guideline and that the protection actually conferred may extend to what a skilled person would have thought of when considering the description and drawings. Rather, the claims define the scope of protection of the patent under Art. 69 EPC and thus the rights of the patentee in the designated Contracting Member States under Art. 64 EPC. In the context of its interpretation, adequate protection for the patentee must be combined with sufficient legal certainty for third parties (cf. Art. 1 Prot. on the interpretation of Article 69 EPC; UPC_CoA_335/2023, Order of 26 February 2023 – NanoString v 10x Genomics; UPC_CoA_8/2024, Order of 13 May 2024, mn. 26 – VusionGroup v Hanshow; UPC_CoA_297/2024, Order of 3 December 2024, mn. 29 – SharkNinja v Dyson).

71. On this basis, the person skilled in the art must bear in mind that claim 1 protects a method which is characterised by a specific sequence of obligatory method steps. All obligatory method steps must be carried out sequentially, since they build on each other: The provided array is brought into contact with a tissue sample, enabling hybridisation of nucleic acid of the tissue sample at the capture domain in the capture probes. *DNA molecules* are *generated from the captured* nucleic acid molecules*,* whereby *the extended or ligated DNA molecules* are *provided with a tag* via the positional domain or a complement thereof. Some of *the* (tagged) *DNA molecules* are released from the surface of the array (emphasis added). The sequence of *the released DNA molecules* is analysed before the information from the sequence analysis is correlated with a position on the tissue sample (emphasis added).

72. If some of the generated and tagged DNA molecules are to be removed from the surface of the array ("releasing ... from the surface of the array"), a surface structure of the array, from which the release takes place, must be present at the time these molecules are released. In contrast, both the method used for the release and the more detailed design of this surface

structure are left to the discretion of the person skilled in the art. In particular, claim 1 does not require that the surface structure is complete, nor that it is unchanged or intact compared to the start of the process. However, it must still exist and thus be identifiable.

73. What the patent in suit understands by an "array" will be clear to a person skilled in the art from paragraph [0016] of the description of the patent in suit, where it states:

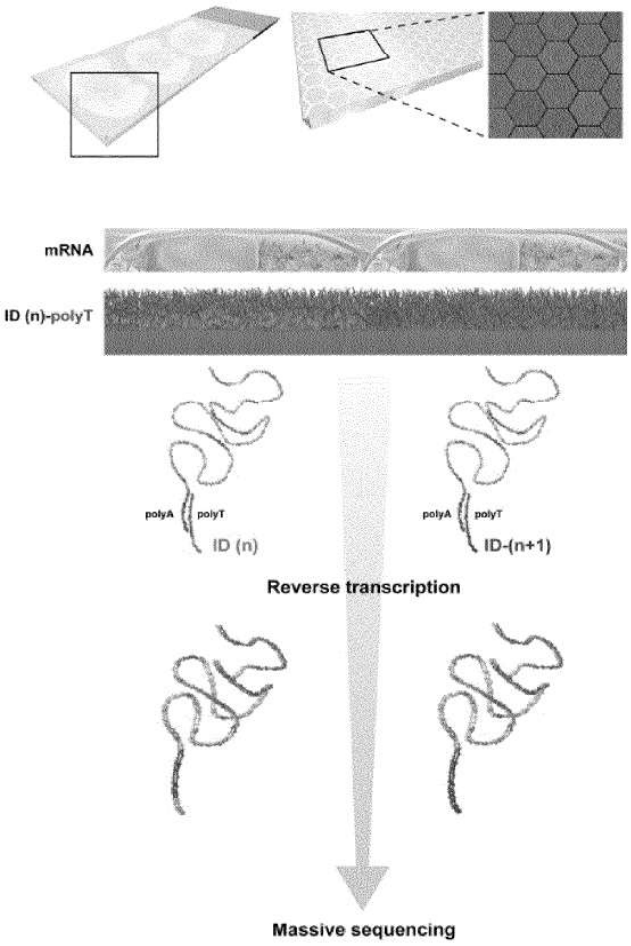
> "Array technology, particularly microarrays, arose from research at Stanford University where small amounts of DNA oligonucleotides were successfully attached to a glass surface in an ordered arrangement, a so-called array [...]".
>
> (emphasis added)

74. In addition, paragraph [0021] states:

> "[...] The invention requires reverse transcription (RT) primers, which also comprise unique positional tags (domains), to be arrayed on an object substrate, e.g. a glass slide, to generate an 'array'".
>
> (emphasis added)

75. Moreover, Figure 1, shown in reduced form below, illustrates how oligonucleotide probes can be bound to an array substrate at either the 5' or 3' end to obtain an array with capture probes (see para [0216]).

Figure 1



76. Even if Figure 1 merely represents an exemplary embodiment to which the protective scope of the patent in suit may not be reduced, it illustrates the insight already gained from the passages of the description of the patent in suit quoted above regarding the understanding of the term "array" on which the patent in suit is based: an array within the meaning of the patent in suit can only be said to exist if oligonucleotides or oligonucleotide probes (plural) are applied to a surface in an ordered manner. There is no longer an array if the connection between the oligonucleotides or oligonucleotide probes and the surface and thus also the corresponding arrangement is dissolved.

77. The submissions of the parties in the proceedings on the merits do not alter this understanding, which was already developed by the Court in the PI proceedings.

78. Insofar as the Claimant is of the opinion that the ordered structure of the probes is only necessary during the “transfer” section of the workflow and need not remain intact during all steps of the claimed workflow, such an understanding, based on purely functionally considerations, cannot be reconciled with the clear wording of claim 1. If at least some of the tagged DNA molecules are to be released from the surface of the array, the array must still exist at least at the release step. Only then can the molecules be released from the surface of the array. Although claim 1 does – as the Court has already explained – not require the surface of the array to remain unchanged throughout the method, nor does it require

the surface to be (completely) intact at the time of release, there must still be an array from its surface the DNA can be removed.

79. The description of the patent in suit does not provide sufficient grounds for a different interpretation.

80. To the extent that the Claimant points out that Figure 1 leaves it open and thus at the discretion of the person skilled in the art whether the storage part (reverse transcription) takes place on the intact array or not, it does also not follow that the patent in suit in Figure 1 omits the release from the surface of an array. Nor can it be inferred from the patent specification that the patent in suit intends the terms "surface of an array" to be understood in a different way from the understanding developed above.

81. As claim 1 requires a release of the DNA molecules (and or their complements or amplicons) from the surface of the array, the Claimant cannot successfully argue that the requirement for an intact array at the time of release does not apply for a bead array. Such bead arrays are mentioned in subclaim 21, which refers back to claim 1. A bead array must therefore also fulfil all the features of claim 1. As far as beads are mentioned in paras. [0044], [0055], there is no indication that the patent in suit assumes that the elements of such arrays are easily separable and that, on that basis, different requirements apply to the design of the array and/or the configuration of the method claimed in claim 1 due to the nature of such arrays.

82. The Claimant correctly points out that the term "array" is used as a reference object in the patent in suit. However, the Court does not see that the patent in suit understands the term "array" to mean anything other than an ordered structure.

83. Insofar as the Claimant refers to the use of the term "array substrate" in claim 13, this does not justify a different assessment. If several types of capture probes are immobilised directly or indirectly to an array substrate (emphasis added), this rather suggests that an ordered structure, and thus an array in the aforementioned sense, results after the application of these species (see also paras. [0047], [0054], [0178], [0179]). Para. [0055] also deals with the immobilisation of the capture probes on the array but does not say any details about its design. The same is true for paras. [0089] et seq. In para. [0059], array probes (emphasis added) are mentioned. However, no requirements for the design of an array according to the invention can be derived from this. Nor can any conclusions be drawn as to the design of the array in the release step.

84. The Claimant referred to subclaims 7 and 8 during the oral hearing to justify its interpretation of feature 1.6. These subclaims, however, do not require a different claim construction.

85. As claim construction is a matter of law and the Court must independently construe the claims (UPC_CoA_768/2024, Order of 30 April 2025, Headnote 1 – Insulet Corporation v EOFlow), and as the construction of feature 1.6. was in dispute between the parties anyway, the Applicant's first reference to subclaims 7 and 9 at the oral hearing was not considered late. The Claimant merely used these subclaims as additional argument to support its previous position that feature 1.6. did not require an array to be an ordered structure.

86. If several embodiments are presented in the description as being in accordance with the invention, the terms used in the claim are to be understood, in case of doubt, as meaning

that all embodiments can be used to fulfil them (UPC_CoA_405/2024 – Alexion Pharmaceuticals v Amgen; UPC_CFI_390/2023 (LD Munich, Panel 1), Decision of 13 September 2024, Headnote 2 – Philipps v Belkin). The same applies for subclaims, which do not normally narrow the scope of the main claim. They merely demonstrate possibilities for its design, which may offer an additional advantage (UPC_CFI_443/2023 (LD Munich, Panel 2), Order of 25 November 2024, Headnote 2 – Häfle v Kunststoff KG Nehl).

87. However, taking into account subclaims 7 and 9, the understanding developed in detail above is consistent with these principles.

88. According to subclaim 7, the complementary strand or second strand cDNA molecule is generated before or after the tagged DNA molecules or cDNA molecules are released from the surface of the array. Subclaim 9 states that the method further comprises the step of amplifying the tagged molecules or cDNA molecules prior to sequence analysis, preferably wherein the amplification step is performed after the release of the tagged DNA or cDNA molecules from the substrate of the array, or wherein the amplification step is performed in situ on the array and/or wherein the step of amplifying comprises a PCR.

89. Both subclaims therefore relate to feature group 1.5. of the feature analysis shown above and therefore to a merely optional step. This step can be performed before or after the release step. If the performance takes place before the release step, the tagged DNA molecules or cDNA molecules are not released from the surface of the array ("… generated before the tagged DNA molecules or cDNA molecules are released from the surface of the array."). If, on the other hand, the step follows the release step, the tagged DNA molecules or cDNA molecules are (already) released from the surface of the array. Subclaims 7 and 9 cover both constellations by referring to the time before or after the release from the surface of the array. However, subclaims 7 and 9 do not provide any information about the requirements for the release step (feature 1.6.). In particular, subclaims 7 and 9 do not provide any indication that the surface of the array from which the release is to take place may already have been destroyed at the time of release.

90. The fact that feature 1.7. requires a direct or indirect analysis of the released DNA does not change this. Even though claim features must always be interpreted in the light of the claim as a whole (UPC_CoA_335/2023, Order of 26 February 2024 – NanoString v 10x Genomics; UPC_CoA_768/2024, Order of 30 April 2025, mn. 37 – Insulet v EOFlow), the terms "direct" or "indirect" refer to the method used, not the object being analysed. Nothing else can be inferred from the description in this regard.

II. Claim 14

91. Claim 14 protects an array. What is protected is therefore a product per se, irrespective of the use to which it is actually put.

92. Insofar as, according to the wording of the claim, it is to be an "array for use in the localised detection of nucleic acid in a tissue sample comprising cells", the reference to such a possible use is merely a stated purpose, which cannot on its own define the absolute protection granted by a product claim. Such statements of purpose usually serve to improve understanding of the invention and as a rule have the indirect effect of defining the subject matter protected by the patent in such a way that it must not only fulfil the spatial-physical

features, but must also be designed to be usable for the purpose stated in the claim (UPC_CFI_463/2023 (LD Düsseldorf), Order of 30 April 2024, p. 19 – 10x Genomics v Curio Bioscience; see also Benkard/Scharen, Europäisches Patentübereinkommen - EPÜ, 4th ed., Art. 69 para. 51).

93. The claimed array comprises a substrate which, in its spatial-physical design, initially corresponds to feature groups 1.2.1. to 1.2.3. of claim 1. To avoid repetition, reference can therefore be made to the relevant explanations. Since claim 14 protects a product, a design already falls within the protective scope if it has the spatial-physical features included in the claim. In contrast, the method used to manufacture the product is irrelevant. The question discussed by the parties of possibly restricting the scope of protection to the print methods mentioned in the description of the patent in suit therefore has no significance from the outset with regard to claim 14.

94. In contrast to claim 1, claim 14 further defines the capture domain for capturing nucleic acid from a tissue sample (feature group 14.3.2.). According to feature 14.3.2.1., the capture domain comprises a Poly-T DNA oligonucleotide which comprises at least 10 deoxythymidine residues, i.e. a series of at least 10 consecutive deoxythymidine residues which are linked by phosphodiester bonds. According to feature 14.3.2.1.1. the capture domain may contain a random or degenerate oligonucleotide sequence in addition to or instead of the Poly-T DNA oligonucleotides. In addition, the capture domain may also include sequences specific for a group of genes (feature 14.3.2.2.). In this case, the capture domain does not comprise a Poly-T DNA oligonucleotide as in feature 14.3.2.1. but specific nucleotide sequences matched to the nucleic acid to be detected.

E. Infringement of claim 14

95. On the basis of such an understanding, the challenged embodiment makes literal use of the teaching of claim 14.

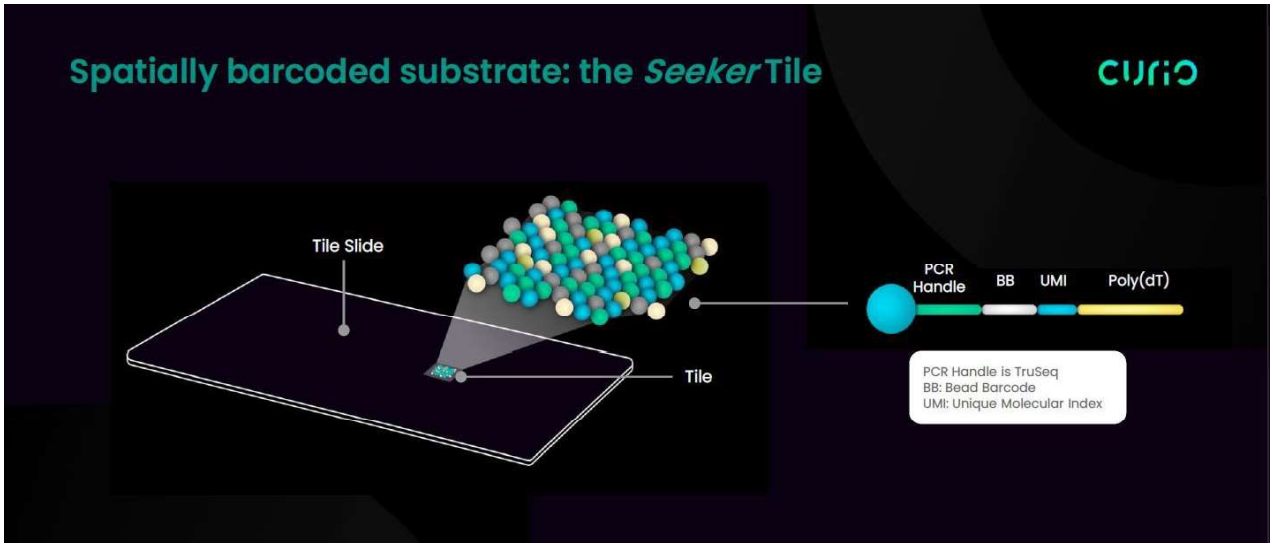
I. Undisputed features

96. The realisation of features 14.1. and 14.2., 14.2.2. and 14.3.2. is correctly not in dispute between the parties. Therefore, no further explanation is required in this respect.

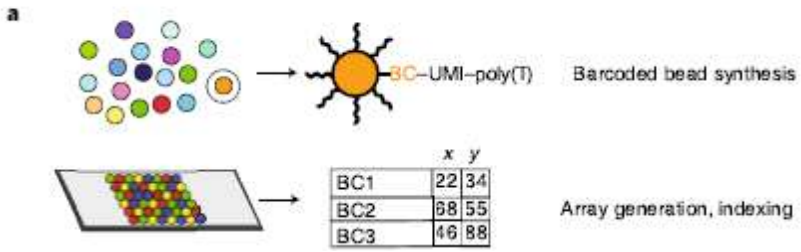
II. Features 14.2.1. and 14.3.1.

97. Based on the above understanding, multiple capture probes are also directly or indirectly immobilised on the substrate such that each species occupies a distinct position on the array (feature 14.2.1.). Correspondingly, the species of capture probes each comprise a nucleic acid molecule with from 5' to 3' a positional domain that corresponds to the position of the capture probe on the array (feature 14.3.1.).

98. As the figure shown below, taken from Exhibit BP 3, illustrates, the capture structure of the challenged embodiment consists of a barcode, a positional domain (BB), a unique molecular identifier (UMI) and a poly-T section.



99. Each capture structure/capture probe therefore has a barcode (BB) that represents a specific position on the array. This can be seen in the figure below, in which the barcodes are labelled with the abbreviation "BC":



100. The fact that this figure is taken from Exhibit BP 6 does not alter its significance for the present proceedings. Even if this Exhibit is a scientific publication describing a so-called "Slid-seq" method, but not directly the challenged embodiment, the Defendant itself emphasises in the press release submitted as Exhibit BP 8 that the challenged embodiment is based on such a method:

101. Where, as here, the Defendant refers to alleged differences between the challenged embodiment and the method described in the above-mentioned article, it is for the Defendant to work out in each case in relation to the individual features of the claim, how specifically the technical design of the challenged embodiment differs in each case from the description in the article and to explain why this is relevant for the question of infringement. The Defendant has not sufficiently complied with this requirement. It merely refers to the fact that the array used in the Slide-seq method is not the same as the array used in the kit. In this regard, the Defendant points out that the quoted extract from BP 6 on “First-strand synthesis” refers to a “template switch oligonucleotide”, which is not present in the kit. However, the Defendant does not comment on how the challenged embodiment should instead be constructed by deviating from the method described in Exhibit BP 6. Moreover,

the Defendant has not (specifically) disputed that the principle shown in the above figure, taken from Exhibit BP 6, is also found in the challenged embodiment (R. 171.2 RoP).

102. Even when the additional arguments put forward during the oral hearing are taken into account the Defendants have not managed to demonstrate any significant differences between the embodiment shown in Exhibits BP 5, BP 5a and BP 6 and the challenged embodiment. Instead, the Defendant referred to some illustrations contained in these documents in order to (allegedly) confirm its assertion that there was no "ordered arrangement" due to the initial random distribution of the beads. However, as the Court explained in detail above, the patent in suit also covers an embodiment in which the beads are initially distributed randomly and their location is then mapped. Such a procedure is described on page 2 of Exhibit BP 5 with regard to Figure 1 ("Schematic of array generation. A monolayer is randomly deposited, DNA barcoded beads (a "puck") is spatially indexed by SOLID sequencing."). As the technical design of the challenged embodiment is undisputed, at least with regard to answering the question of infringement, there was no reason to examine the sample provided by the Defendant at short notice before the oral hearing. Therefore, the question of whether these samples should have been taken into account at all (R. 9.2 RoP) can remain undecided.

103. The barcode of the capture probes located on a bead is identical and can therefore be assigned to the original position of the bead within the array.

104. It is undisputed and confirmed by the figure shown below, taken from Exhibit BP 3, that the shipment package of the challenged embodiment includes files with the aid of which the barcodes or positional domains can be assigned to the associated positions on the array:

105. Since in the challenged embodiment the barcoded beads are randomly distributed, it is imperative that the beads are localised according to this random distribution. In any event, this is taken into account by means of the text file provided, which can be used to combine the positional domain information with the localisation information. Thus, in the challenged embodiment, each capture structure/capture probe has a specific position, which can also be read out via the positional domain. A predetermination of the position of the beads on the array is not required in order to implement the protected technical teaching.

106. The fact that the beads in the challenged embodiment also have a UMI sequence ("Unique Molecular Index) in addition to the barcode sequence does not justify the conclusion that

the challenged embodiment falls outside the scope of protection of the patent in suit. The Defendant itself argues that the barcode sequence in each of the oligonucleotides is identical for a particular bead. This allows the bead to be assigned to a specific position (see SoC, p. 20, mn. 5.39). In contrast, the UMI sequence is different. If a bead has 100 oligonucleotides attached to it, they will have the same BB sequence, but they will have 100 different UMI sequences. This does not change the fact that the position of each bead can be determined by a barcode sequence. The challenged embodiment thus comprises a positional domain that corresponds to the position of the capture probe on the array.

107. The existence of duplicates, as asserted by the Defendant, does not preclude this. The occurrence of such duplicates is inherent for the bead technology. It must be taken into account that the patent in suit expressly permits the use of such bead technology (see also subclaim 21, which is dependent on claim 14, and para. [0044]). The patent in suit therefore knowingly accepts possible inaccuracies with such a method. If this is not the case, it must in any event be taken into account that the patent in suit is not primarily concerned with determining the position of individual beads. Rather, the subject matter of the invention protected by claim 14 is a product for the localized detection of nucleic acids in a tissue sample. As long as the achievement of this objective is not jeopardised by individual duplicates, these do not preclude the realisation of the invention. However, the Defendant does not claim that the duplicates which, according to the Defendant, occur in the challenged embodiment jeopardise the achievement of this objective. Rather, during the oral hearing, the Defendant admitted, in response to a question by the Court, that the challenged embodiment ignores duplicates.

108. The Claimant's assertion that the challenged embodiment contains at least 10 deoxythymidine residues was not substantially contested by the Defendant (feature 14.3.2.1., R. 171.2 RoP).

109. On the basis of the article submitted as Exhibit BP 6, with regard to the relevance of which reference is made to the above explanations, the Claimant submitted detailed information on the configuration of the capture domain of the capture probe of the challenged embodiment and, as evidence, specifically explained the length of the poly-T sequence (see SoC, p. 59). The Claimant has referred to the "supplementary Information" to the disclosure according to annex BP 4, from which a length of the poly-T sequences of 30 deoxythymidine residues is derived (cf. Exhibit BP 4, p. 2 "Materials and Methods"). Like Exhibit BP 6, this Exhibit is also relevant for the present proceedings. Concrete evidence that this length would have been changed during the development of the Defendant's commercial product, and in particular reduced to be less than 10, is neither submitted nor apparent. The Defendant has therefore not significantly countered the submissions of the Claimant supported by annexes BP 3 and BP 4. It can therefore be assumed that feature 14.3.2.1. has been realised.

III. Infringement actions

110. The Defendant does not dispute that it offers and supplies the challenged embodiment, inter alia, in Germany, France and Sweden. It is also undisputed that the challenged embodiment was delivered to the University Medical Centre Mannheim of Heidelberg University in the 37th calendar week of 2023 (see Exhibits BP 16 and BP 16a). By offering and placing the challenged embodiment on the market, the Defendant gives rise to a rebuttable presumption that it also uses it or imports or possesses it for the purposes of offering, placing

on the market, or using it (see UPC_CFI_7/2023 (LD Düsseldorf), Decision of July 3, 2024, p. 26 – Kaldewei v Bette; UPC_CFI_363/2023 (LD Düsseldorf), Decision of October 10, 2024, p. 41 – Seoul Viosys v expert e-Commerce; UPC_CFI_50/2024 (LD Düsseldorf), Decision of April 10, 2025, para. 199 – Yellow Sphere v Knaus Tabbert; UPC_CFI_11/2024 (LK Düsseldorf), Decision of May 8, 2025, para. 160 – Grundfos v Hefei Xinhu).

F. (Non) infringement of claim 1

111. Even taking into account the submissions put forward by the parties in the proceedings on the merits, the Court is not able to establish an indirect infringement of claim 1 through the offer and distribution of the challenged embodiment in Germany, France and Sweden for use there.

112. The Court is unable to establish the suitability of the challenged embodiment for carrying out the method protected by claim 1. Based on the understanding of the protective scope elaborated above in detail, the Claimant has also in the proceedings on the merits not succeeded in demonstrating conclusively that feature group 1.6. of claim 1 has been realised.

113. As the Court has already worked out in detail in the context of the interpretation, features 1.6. and 1.6.1. require "releasing at least part of the tagged DNA and/or their complements or amplicons from the surface of the array" (emphasis added). Even if claim 1 does not specify the more detailed technical design of the surface structure of the array at the time of release, the presence of an array in the aforementioned sense, from the surface of which the release takes place, remains necessary.

114. This is lacking in the challenged embodiment.

115. As the Claimant explained in detail, in the challenged embodiment, there is a tile on the slide with a plurality of beads on which the capture structures/capture probes are located, on which cDNA molecules are generated by way of reverse transcription. After reverse transcription, the cDNA molecules, together with the capture structures/capture probes containing the positional domain are detached from the underlying surface of the beads. However, an individual bead is not an ordered structure in the aforementioned sense and thus not an array. If the array has already been destroyed in the step preceding the release and is therefore no longer present, no release from the surface of such an array within the meaning of feature 1.6. can take place in the subsequent step. Therefore, the challenged embodiment are not suitable for the realisation of the aforementioned feature.

116. The same applies insofar as the Claimant additionally refers to the amplification. According to the Claimant, as part of the amplification, the double-strand cDNA, including the capture probe with positional domain, is multiplied. During amplification, a cDNA double strand is separated. The resulting single strand, which has no connection to the bead, is separated from the bead and therefore not from the surface of an array in the aforementioned sense.

G. Legal consequences

I. Permanent Injunction

117. Having regard to the circumstances of the case, the Claimant is entitled to seek an injunction

to prevent the continuation of infringement pursuant to Art. 25(a) UPCA in conjunction with Art. 63(1) UPCA.

II. Information

118. The Claimant also has a right to information pursuant to Art. 25(a) UPCA in conjunction with Art. 67 UPCA. There are no objections to the requested form of information.

119. Furthermore, pursuant to Art. 68(3)(a) and (b) UPCA in conjunction with R 191.1 and 2 RoP, for the purpose of asserting its legal rights, the Claimant may request all information which it reasonably requires for the purpose of asserting its legal rights and which also enables it to verify the accuracy of the information provided and to obtain evidence for the calculation of its damages (UPC_CFI_7/2023 (LK Düsseldorf), Decision of 3 July 2024, p. 29 – Kaldewei v Bette; UPC_CFI_16/2024 (LK Düsseldorf), Decision of 14 January 2025, p. 36 – Ortovox v Mammut; UPC_CFI_210/2023 (LK Mannheim), Decision of 22 November 2024, para. 179 – Panasonic v Oppo). This includes information on individual offers, broken down by quantity, time, price and type, as well as the names and addresses of the recipients of the offers (UPC_CFI_11/2024 (LD Düsseldorf), Decision of 8 May 2024, mn. 163 – Grundfos v Hefei).

III. Recall

120. The order to recall the directly infringing products from the distribution channels is based on Art. 64(2)(b) UPCA. The Defendant has not presented any facts that could justify the recall as being disproportionate (Art. 64(4) UPCA).

IV. Destruction

121. The order for destruction is based on Art. 64(2)(e) and Art. 64(4) UPCA. The Defendant has also failed to present any facts that could justify the destruction being disproportionate.

V. Determination of liability for damages

122. The basis for determining liability for damages is set out in Art. 68(1) UPCA. The Defendant should have recognized, with due care, that its actions infringed the disputed patent. This has not been disputed by the Defendant.

VI. Publication

123. Exercising its discretion, the Court sees no reason to grant permission for publication in the present case.

124. Art. 80 UPCA leaves it to the discretion of the Court whether or not to permit such publication. It must be taken into account that publication also contains an additional element of sanction. For such an order to be issued, the Claimant's interest in publication must outweigh the negative consequences of such publication for the Defendant. As a rule, publication may only be permitted if the Claimant's protection is not already ensured by other measures (UPC_CFI_373/2023 (LD Düsseldorf), Decision of 31 October 2024 – SodaStream v Aarke; UPC_CFI_16/2024 (LD Düsseldorf), Decision of 14 January 2025 – Ortovox v Mammut).

125. Based on these principles, there are no grounds that would justify permitting publication in the present case, nor are any such grounds apparent.

VII. Threat of penalty payments

126. The threat of a penalty payments for non-compliance (Art. 63(2) UPCA) does not give rise to concern. This is also true from the point of view of proportionality.

127. The threatened penalty payment of up to EUR 100,000 provides the Court with the necessary flexibility to consider the circumstances of each case, including the behaviour of the infringer when determining an appropriate penalty payment pursuant to Art. 82(4) S. 2 UPCA in conjunction with R. 354.4 RoP.

H. Cost decision

128. Pursuant to Art. 69(2) UPCA in conjunction with R. 118.5 RoP, a decision on the costs has to be made.

129. When deciding how to distribute the costs, the Court considered that the Claimant succeeded in proving direct infringement. Based on this, the Court orders all the legal consequences requested, except for permission to publish. It is therefore justified that the Defendant should bear the majority of costs. However, the Court was unable to find any indirect infringement of claim 1, which has to be taken into account in favour of the Defendant. The costs of language change requests are included in the procedural costs. Eligibility for reimbursement will be determined during the procedure for cost decision (R. 150 et seq. RoP)

130. In addition, the Defendant is also obliged to reimburse the Claimant the majority of the costs of the PI proceedings. The Court also considered the fact that it found a direct infringement of the patent in suit and ordered a preliminary injunction in favour of the Claimant. However, the Court was unable to find any indirect infringement of claim 1 during the PI proceedings. This has to be taken into account when deciding on the costs to be paid by the Claimant. Furthermore, when deciding on the costs of the PI proceedings, it is necessary to take into account the fact that the Claimant has to cover the costs of its (withdrawn) appeal (UPC_CoA_234/2024, APL_27805/2024, App_38102/2024, order of 5 July 2024 – 10x Genomics v Curio Bioscience).

I. No order for security

131. Pursuant to Art. 82(2) UPCA, R. 118.8 S. 2 RoP, the Court may make any order or measure subject to the lodging of a security to be determined by the Court.

132. As the wording of the above provision makes clear, the Court has a discretion when ordering security, whereby the interest of the Claimant in the effective enforcement of its patent must be weighed against the interest in effective enforcement of possible claims for damages in the event of a subsequent reversal of the judgment.

133. Each case must therefore be examined individually. Factors to be taken into account when

deciding whether to order security include the financial situation of the Claimant, which may give rise to legitimate and real concerns that a possible claim for damages cannot be enforced and/or executed, or can only be enforced and/or executed with disproportionate effort, if the decision of the Court of First Instance is set aside or amended. Whether and to what extent such factors exist must be determined, as in the case of an application for security pursuant to R. 158 RoP, on the basis of the facts and arguments presented by the parties. If the Court makes an order or measure dependent on security, this serves to protect the position and potential rights of the defendant. This protection must be weighed against the burden placed on the Claimant by the order to provide security. Against this background, it is for the Defendant to submit facts and arguments as to why it is appropriate in the particular case to make the order or measure pursuant to R. 118.8 RoP subject to a security to be determined by the Court. If the defendant has complied with this, it is incumbent on the Claimant to substantiate these facts and reasons, especially since he generally has knowledge and evidence of its financial situation. It is also the Claimant's responsibility to explain, if necessary, why, despite the reasons put forward by the defendant, its interest in enforcing his property right outweighs the defendant's interest in avoiding the provision of security (see UPC_CFI_11/2024 (LD Düsseldorf), Decision of 8 May 2025, mn. 185 – Grundfos v Hefei; UPC_CFI_50/2024 (LD Düsseldorf), Decision of 10 April 2025, mn. 282 - 285 – Yellow Sphere v Knaus Tabbert; UPC_CFI_16/2024 (LD Düsseldorf), Decision of 14 January 2025 – Ortovox v Mammut; UPC_CFI_363/2024 (LK Düsseldorf), Decision of 10 October 2024 – Seoul Viosys v expert).

134. On the basis of these principles, the Defendant has not put forward any reasons which would justify making enforcement in the present case dependent on the provision of security. To the extent that the Defendant refers to certain articles, it is clear from those articles that the Claimant's share price has fallen. However, that alone does not automatically mean that the Claimant is now in such poor financial position that it would not be able to compensate any damage resulting from enforcement. Nor can such a conclusion be drawn from the fact that the Claimant has replaced the security deposit in the PI proceedings with a bank guarantee.

135. Insofar as the Defendant justifies its request for security by stating that it has an interest in enforcing its potential claim for damages as quickly as possible in the light of the preliminary injunction, this does not in itself justify the ordering of security. The security is a safeguard in the event that compensation cannot be paid. The order for security therefore requires that there is a reasonable suspicion that this is a real possibility given the Claimant's potential lack of financial capacity. The facts supporting this suspicion must be provided by the Defendant. A mere reference to its interest in enforcement does not exempt the Defendant from this requirement.

G. Value of the dispute

136. The value of the dispute stated by the Claimant at EUR 3,000,000 appears reasonable.

137. In this context, the Claimant rightly points out that the value of the dispute in the previous PI proceedings was set at EUR 2,000,000 without being challenged by the Defendant. Since the Claimant now is seeking a permanent injunction and other measures such as information, destruction and permission to publish, as well as a declaration of liability for damages, it is justified to set the value in dispute in the proceedings on the merits at a higher level than in the PI proceedings. The increase requested by the Claimant appears reasonable.

138. To the extent that the Defendant refers to the “Guidelines for the determination of the Court fees and the ceiling for recoverable costs” (D-AC/09/24042023_E) and requests a reduction of the value in dispute to EUR 60,000, the Defendant correctly points out that the value of dispute in an infringement action should be based on a royalty calculation. In accordance with point II. 1. a) (a) of these Guidelines, the Defendant´s turnover in the alleged infringing products for the future up to the expiry of the patent (injunction claim) and for the past (damage claim) should be calculated based upon the known existing turnover of the Defendant or, if not known or not yet existent, the market share the Defendant has taken and/or may reasonably be assumed to take.

139. However, to the extent that the Defendant bases its calculations on the turnover it has achieved with the challenged embodiment in Germany, France and Sweden, this does not constitute a suitable basis for calculating the value in dispute in the present case, since the Defendant is currently prevented from generating sales in these countries by the granted preliminary injunction. Nor can the Defendant’s market share with the challenged embodiment be used as a basis for calculating the value in dispute. The period prior to the preliminary injunction is also not a sufficient starting point in this respect, given the dynamic market environment in the sector concerned (see UPC_CFI_463/2023 (LD Düsseldorf), order of 30 April 2024, p. 36 point d) – 10x Genomics v Curio Bioscience).

140. Against this background, it is justified to base the calculation of the value of the dispute on the undisputed value in the PI proceedings and to add a surcharge, as proposed by the Claimant. The Court is also entitled to do so. According to the introduction, the Guidelines do not interfere with the liberty of judges to apply in a given case other methods which may be required by the circumstances of the case. In the present case, the Court makes use of this possibility.

DECISION:

A. The Defendant is ordered to cease and desist in the territories of the Federal Republic of Germany, the French Republic and/or the Kingdom of Sweden from

offering, placing on the market, utilizing or either importing or stocking for the above purposes an array for use in localized detection of nucleic acid in a tissue sample comprising cells, comprising a substrate on which multiple species of capture probes are directly or indirectly immobilized such that each species occupies a distinct position on the array and is oriented to have a free 3' end to enable said probe to function as an extension or ligation primer, wherein each species of said capture probe comprises a nucleic acid molecule with 5' to 3':

(i) a positional domain that corresponds to the position of the capture probe on the array, and

(ii) a capture domain to capture nucleic acid of a tissue sample that is contacted with said array comprising a poly-T DNA oligonucleotide comprising at least 10 deoxythymidine residues, in the territory of one or more of the states specified under A.

(direct infringement of claim 14 of EP 2 697 391 B1)

B. The Defendant is ordered to recall the infringing products under Item A. from commercial customers with reference to the patent infringing status established by decision of the Unified Patent Court and with the binding commitment to refund any fees as well as to assume all necessary packaging and transport costs as well as customs and storage costs associated with the recall, and to reclaim the products, where the Claimant is to be provided with a sample of the recall letters and a list of the addressees with names and postal addresses – or, at the Defendant's option – a copy of all recall letters, and in this way and/or by exercising retentions of title and/or the termination of long-term obligations and/or exercise of other claims for surrender, to permanently remove products under Item A. from the channels of distribution.

C. The Defendant is ordered to destroy the infringing products in accordance with Item A. at its own expense.

D. The Defendant is ordered to provide the Claimant with information in writing or in electronic form and to provide a written or electronic account (electronically evaluable, e.g. using Microsoft Excel) in an orderly list, including supporting documents namely invoices alternatively delivery notes alternatively receipts, of the extent to which it has committed the acts referred to in A. since 30 November 2019,

and to specifically detail in each case

1. the individual deliveries pursuant to A., in each case itemized by the times and prices including invoice numbers and respective model designations, as well as the names and addresses of customers, including retail outlets, for which the products were intended,

2. the individual offers, itemized by offering quantities, times and prices and the respective method designations, as well as the names and addresses of the offerees,

3. the promotions carried out, itemized by advertising media, their circulation, distribution period and distribution area, in the case of Internet advertising the domain, traffic figures and the placement intervals, and in the case of direct advertising, such as circulars, the names and addresses of the recipients,

where the Defendant may retain the right to notify the names and addresses of the offerees and non-commercial customers, instead of to the Claimant, to a certified accountant to be designated by the Claimant and sworn to confidentiality who is domiciled in Germany, provided that the Defendant bears the associated costs and obligates him at the same time to communicate to the Plaintiff upon specific request whether a particular offeree or non-commercial customer is contained in the rendering of accounts provided.

E. The Defendant is ordered to compensate the Claimant for any damage caused and still being caused by the acts carried out under Item A. subsequent to 30 November 2019.

F. In the event of failure to comply with the order under Item A., the Defendant shall make a (if applicable periodic) penalty payment to the Court of up to EUR 100,000 for each day of failure to comply.

G. The action is dismissed in all other aspects.

H. The costs of the PI proceedings (UPC_CFI_463/2023) shall be borne by the Claimant in the amount of 30 % and by the Defendant in the amount of 70 %.

The costs of the infringement action shall be borne in the amount of 30 % by the Claimant and 70 % by the Defendant.

I. The value in dispute of the PI proceedings is set at EUR 2,000,000.

The value in dispute of the infringement action is set at EUR 3,000,000.

J. The ceiling of recoverable representation costs is set at EUR 200,000 for the PI proceedings and at EUR 400.000 for the infringement action.

K. The orders under Items A., B., C., D. and E. shall only be enforceable after the Claimant has informed the Court which part of the orders it intends to enforce and, if necessary, has submitted a certified translation of the orders into the official language of the Contracting Member State in which enforcement is to take place, after the Defendant has been served with the notification and the (respective) certified translation.

DETAILS OF THE DECISION:

Main file reference ACT_15774/2024

UPC-number: UPC_CFI_140/2024

Type of procedure: Infringement action

Düsseldorf on 16 June 2025

NAMES AND SIGNATURES

Presiding Judge Thomas	Ronny Thomas Digital unterschrieben von Ronny Thomas Datum: 2025.06.11 11:04:34 +02'00'
Legally qualified judge Dr Thom	Anna Bérénice Dr. THOM Digital unterschrieben von Anna Bérénice Dr. THOM Datum: 2025.06.11 11:08:27 +02'00'
Legally qualified judge Kupecz	András Ferenc Kupecz Digital unterschrieben von András Ferenc Kupecz Datum: 2025.06.11 11:55:30 +02'00'
Technically qualified judge Dr Schmidt	Martin SCHMIDT Signature numérique de Martin SCHMIDT Date : 2025.06.11 13:38:47 +02'00'
For the sub-registrar Boudra-Seddiki	Rachida Boudra-Seddiki Digital unterschrieben von Rachida Boudra-Seddiki Datum: 2025.06.12 08:11:40 +02'00'

INFORMATION ON APPEAL:

An appeal against this decision may be brought before the Court of Appeal by any party whose claims have been unsuccessful, in whole or in part, within two months of service of the decision (Art. 73(1) UPCA, R. 220.1 (a) RoP, 224.1 (a) RoP).

INFORMATION ON ENFORCEMENT (Art. 82 UPCA, Art. 37(2) UPCS, R. 118.8, 158.2, 354, 355.4 RoP):

An authentic copy of the enforceable order will be issued by the Deputy-Registrar upon request of the enforcing party, R. 69 RegR.

This decision was read in open court on 16 June 2025.
Presiding Judge Thomas

Ronny Thomas

Digital unterschrieben von Ronny Thomas
Datum: 2025.06.16 11:09:13 +02'00'