EUROPEAN COMMISSION
DG Competition

# *Case M.8541 - THERMO FISHER SCIENTIFIC / PATHEON*

Only the English text is available and authentic.

## REGULATION (EC) No 139/2004
## MERGER PROCEDURE

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Article 6(1)(b) NON-OPPOSITION
Date: 23/08/2017

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EUROPEAN COMMISSION

Brussels, 23.8.2017
C(2017) 5906 final

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus […]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

To the notifying party:

**Subject:** **Case M.8541 - Thermo Fisher Scientific / Patheon**
**Commission decision pursuant to Article 6(1)(b) of Council Regulation No 139/2004[1] and Article 57 of the Agreement on the European Economic Area[2]**

Dear Sir or Madam,

(1) On 19 July 2017, the European Commission received notification of a proposed concentration pursuant to Article 4 of the Merger Regulation by which the undertaking Thermo Fisher Scientific Inc. ("Thermo Fisher", USA) acquires within the meaning of Article 3(1)(b) of the Merger Regulation control of the undertaking Patheon N.V. ("Patheon", The Netherlands) by way of a purchase of shares.[3] (Thermo Fisher and Patheon are designated hereinafter as the 'Parties' or 'Parties to the proposed transaction'.)

1 OJ L 24, 29.1.2004, p. 1 (the 'Merger Regulation'). With effect from 1 December 2009, the Treaty on the Functioning of the European Union ('TFEU') has introduced certain changes, such as the replacement of 'Community' by 'Union' and 'common market' by 'internal market'. The terminology of the TFEU will be used throughout this decision.

2 OJ L 1, 3.1.1994, p. 3 (the 'EEA Agreement').

3 OJ C 242, 27.7.2017, p. 19.

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## 1. THE PARTIES

(2) Thermo Fisher is a manufacturer and supplier of laboratory equipment, analytical instruments, diagnostics, and related products and services. It is headquartered in the United States and active internationally.

(3) Patheon is a contract development and manufacturing organisation ("CDMO"), offering active pharmaceutical ingredients and finished drug product services. It is headquartered in the Netherlands and active internationally.

## 2. THE OPERATION

(4) On 15 May 2017, Thermo Fisher and Patheon announced that they had entered into a binding agreement under which Thermo Fisher will acquire all of the outstanding ordinary shares of Patheon.

(5) The transaction therefore constitutes a concentration under Article 3(1)(b) of the Merger Regulation.

## 3. EU DIMENSION

(6) The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million[4] [Thermo Fisher: EUR 16 518 million; Patheon: EUR 1 683 million]. Each of them has an EU-wide turnover in excess of EUR 250 million [Thermo Fisher: […]; Patheon: […]], but they do not achieve more than two-thirds of their aggregate EU-wide turnover within one and the same Member State.

(7) The notified operation therefore has an EU dimension pursuant to Article 1(2) of the Merger Regulation.

## 4. RELEVANT MARKETS

### 4.1. Overview of Parties' activities

(8) Patheon is active in commercial scale manufacturing and packaging of finished drug pharmaceutical products, contract manufacturing services for commercial scale active pharmaceutical ingredients ("APIs") and high potency APIs ("HAPIs"), contract manufacturing services for biopharmaceuticals, and pharmaceutical development services.

(9) While Thermo Fisher is not active in any of the markets where Patheon operates, it supplies a wide range of products, including chemicals, laboratory equipment and consumables, and other inputs used also by biopharma companies and CDMOs.

4 Turnover calculated in accordance with Article 5 of the Merger Regulation.

(10) The transaction does not give rise to any horizontal overlaps. However, it creates vertical links between the Parties in relation to cell culture, single-use-technologies, mass spectrometry and chromatography, and molecular biology where Thermo Fisher is active as a supplier and Patheon as a buyer. The relevant downstream markets where Patheon is active, are the markets for contract manufacturing and packaging of pharmaceuticals.

### 4.2. Market investigation

(11) The Commission has conducted a market investigation and sent questionnaires to customers and competitors of the Parties, focussing in particular on the vertical relations of the Parties and the competition between CDMOs.

### 4.3. Relevant upstream markets

#### *4.3.1. Cell culture products*

(12) Thermo Fisher provides two types of cell culture products: sera and media. Both are used to provide nutrition and therefore grow cells of human, animal, insect, and plant nature. While sera are produced from blood, other media are not.

##### 4.3.1.1. Product market

(13) The Commission has previously considered a separate market for sera and concluded that it is likely that this could be segmented based on customer type, type of animal the blood originates from, and geographic origin of the blood provided; however, this question was finally left open.[5]

(14) The Commission has also previously considered a separate market for media and discussed that this could likely be subdivided by customer group, form, type, and chemical composition but ultimately left this question open.[6]

(15) The Parties agree with the considerations of the Commission and submit that cell culture products should be differentiated by customer type because research customers and (bio)production customers have different needs and operate in different regulatory environments.[7] Patheon is only active in the (bio)production sector.

(16) The Commission takes note of its previous considerations. For the purpose of this decision, the exact market definition can be left open, as this would not change the outcome of the competitive assessment.

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5 M.6944 *Thermo Fisher Scientific / Life Technologies*, paragraph 51; M.7435 *Merck / Sigma-Aldrich*, paragraph 48-51.

6 M.6944 *Thermo Fisher Scientific / Life Technologies*, paragraphs 22-28.

7 Form CO paragraph 6.105 et seq.; the Parties provided market shares on separate as well as a combined level in Annex 18 to the Form CO.

#### 4.3.1.2. Geographic market

(17) The Parties claim that the markets for cell culture are global or at least EEA-wide in scope because of centralised shipping and supply, a common regulatory environment, common competitive constraints, and global pricing dynamics.[8]

(18) The Commission has, in the past, discussed whether the markets for cell culture products are global or EEA-wide in scope but ultimately left the precise geographic market definition open.[9]

(19) The results of the market investigation did not reveal any information that would contradict a finding that the markets for cell culture products are at least EEA-wide in scope. However, the exact geographic scope of the markets can be left open for the purpose of this decision, as the transaction does not lead to any competition concerns in the relevant markets for cell culture products.

### *4.3.2. Single use technologies*

(20) Thermo Fisher produces single use technology ("SUT") products that are used to process, store, or transport bio-pharmaceutical material in the manufacture of protein-based biological drugs. They are intended for one-time use to improve safety and reduce cleaning and sterilisation costs.

#### 4.3.2.1. Product market

(21) The Parties suggest to differentiate between different functions namely bioreactors, bags, mixers, transfer assemblies, and others. Bioreactors are vessels that support a biologically active environment through several conditions and therefore enable large-scale cell culture growth for the purposes of vaccine or other biopharmaceutical product development. Single use bioprocess bags are used for storage and transport or sterile input material for bioproduction processes. Single use mixers are used for the preparation of media and other process liquids. Transfer assemblies refer to tubes, valves, and other types of connectors used for the physical transfer of liquids in the production process.

(22) All single use products are intended to replace multi-use systems that would require cleaning and sterilisation before each new use.

(23) The Commission has not previously considered SUT products for biopharmaceutical production processes. It considers that the precise product market definition can be left open for the purpose of this decision, as this would not change the outcome of the competitive assessment.

#### 4.3.2.2. Geographic market

(24) The Parties submit that the relevant markets for SUT are at least EEA-wide in scope because products are manufactured at centralised sites and shipped via regional distribution hubs to customers globally. Transportation costs are low as a

8 Form CO, paragraph 6.108.

9 M.6944 *Thermo Fisher Scientific / Life Technologies*, paragraphs 31-32.

proportion of total costs and there are no regulatory differences within the EEA for these products.

(25) The Commission has no indications that the relevant markets for SUT could be smaller than EEA-wide. For the purpose of this decision, the Commission therefore assesses the proposed transaction on an EEA-wide basis and a global basis, leaving the precise geographic market definition open, as this would not change the outcome of the competitive assessment.

*4.3.3. Mass spectrometry and chromatography*

(26) Thermo Fisher produces instruments and consumables used to separate compounds into their components for analytical purposes.

4.3.3.1. Product market

(27) The Parties propose the following relevant sub-markets in line with past Commission decisions: (i) mass spectrometry instruments, (ii) atomic spectroscopy instruments, (iii) liquid chromatography instruments, (iv) liquid chromatography consumables, and (v) laboratory gas chromatography instruments.

(28) The Commission has previously considered differentiating between different types of analytical life science instruments, namely mass spectrometry, atomic spectroscopy, liquid chromatography, and gas chromatography.[10]

(29) Mass spectrometry instruments are detectors which convert the molecules in a sample into ions (charged particles). These charged particles are then separated according to their mass-to-charge ratio and the quantity of each ion is measured. The Commission has previously sub-segmented the sector for mass-spectrometry according to the specific analytical technique used.[11] However, such further sub-segmentation can be left open for the purpose of this decision, as this would not change the competitive assessment.

(30) Atomic spectrometry allows the user to determine the atomic composition of a sample, i.e. determine which elements are present in the substance to be analysed. The Commission has previously considered several sub-segments based on different techniques.[12] However, such further sub-segmentation can be left open for the purpose of this decision, as this would not change the competitive assessment.

(31) Liquid chromatography is a technique involving the separation of soluble chemical components in a liquid stream. The Commission has considered different forms of liquid chromatography which are based on the pressure applied to the separation device. High performance liquid chromatography (HPLC) uses high pressure, while low pressure liquid chromatography (LPLC) is a simpler technology, using only limited pressure to achieve rough separation of chemical

10 M.6126 *Thermo Fisher Scientific / Dionex Corporation* and M.5611 *Agilent / Varian*.

11 M.5611 *Agilent / Varian*, paragraph 10 *et seq*.

12 M.5611 *Agilent / Varian*, paragraph 43.

and biochemical compounds.[13] In addition, the Commission has also identified two additional sub-segments, namely ion chromatography and supercritical fluid chromatography.[14] Ion chromatography differs from other types of chromatography because it is principally employed for the analysis of inorganic ions, while other liquid chromatography instruments are used for the analysis of organic material.

(32) Gas chromatography instruments separate a sample of thermally stable, vaporised substance into its individual components. The Commission has previously considered a sub-segmentation based on the specific capabilities of the instrument.[15] However, such further sub-segmentation can be left open for the purpose of this decision, as this would not change the competitive assessment.

(33) For the purpose of this decision and in light of the activities of the Parties, the Commission considers separate markets for mass spectrometry and ion chromatography instruments. However, the precise market definition can be left open because this would not change the competitive assessment.

4.3.3.2. Geographic market

(34) The Commission has previously concluded that the geographic scope of these markets to be at least EEA-wide in scope but left the precise geographic market decision open for several sub-segments that could also be global. The Parties do not object to this definition.

(35) For the purpose of the current decision, the precise geographic scope of the relevant markets can be left open, as this would not change the competitive assessment.

*4.3.4. Molecular biology*

(36) Molecular biology is the study of the molecular components present in the cells of living organisms, primarily ribonucleic acid RNA and deoxyribonucleic acid (DNA).

4.3.4.1. Product market

(37) The Commission has previously considered the following areas within molecular biology that could be relevant in the case at hand: transfection, nucleic acid (NA) amplification, NA purification, and cloning.[16]

(38) Transfection reagents are used in a broad range of applications to chemically introduce external material into a cell ("delivery"). The Commission has previously concluded that there is one separate market for all transfection reagents.[17] The Parties agree with this finding.

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13 M.5611 *Agilent / Varian*, paragraph 29.
14 M.6126 *Thermo Fisher / Dionex Corporation*, paragraph 12.
15 M.5611 *Agilent / Varian*, paragraph 21.
16 M.6944 *Thermo Fisher Scientific / Life Technologies*, paragraph 71.
17 M.6944 *Thermo Fisher Scientific / Life Technologies*, paragraph 112.

(39) NA amplification comprises technologies to amplify or copy a segment of NA (DNA or RNA) to enable further analysis. The most commonly used technology is Polymerase Chain Reaction (PCR). The Commission has previously considered separate markets for instruments and reagents and found several further sub-segments thereof.[18] The Parties do not object to these precedents.

(40) NA purification techniques are used to isolate a target element, which may be a NA molecule, protein, or cell. The Commission has previously found separate markets for several types of purification instruments as well as consumables, namely molecular weight standards (i.e. DNA ladders).[19] The Parties agree with these previous findings of the Commission.

(41) Cloning involves the replication of a single DNA molecule starting from a single living cell to generate a large population of cells containing identical DNA molecules. The Commission has previously left open if restriction enzymes and modifying enzymes constitute separate markets but considered a separate market for cloning kits.[20] The Parties submit that all cloning enzymes should be considered as one single market but also agree that cloning kits should be analysed separately.

(42) For the purpose of this decision, the precise market definition can be left open, as this would not change the competitive assessment.

4.3.4.2. Geographic market

(43) The Commission has previously found all relevant markets discussed above to be at least EEA-wide.[21] For the purpose of the current decision, the precise geographic scope of the relevant markets can be left open as this would not change the competitive assessment.

## 4.4. Relevant downstream markets

### *4.4.1. Product market*

(44) Patheon is active in commercial scale manufacturing of finished dose pharmaceuticals (FDPs) for biologics, which involves manufacturing the final form of a pharmaceutical product containing both the APIs and the non-active components. Patheon is also active in the packaging of FDPs.

(45) The Parties suggest assessing the market for production and packaging of FDPs separately. In each case, a further segmentation should be based on the pharmaceutical form rather than the conditions of manufacturing or APIs used. The Parties specifically propose to differentiate between (i) solid dose, liquid dose, and semi-liquid dose; (ii) injectables; (iii) speciality dose; (iv) and softgel form.

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18 M.6944 *Thermo Fisher Scientific / Life Technologies*, paragraph 136; M.5246 *Invitrogen/ Applied Biosystems*, paragraph 51.

19 M.6944 *Thermo Fisher Scientific / Life Technologies*, paragraph 182; M.5246 *Invitrogen/ Applied Biosystems*, paragraph 65.

20 M.6944 *Thermo Fisher Scientific / Life Technologies*, paragraph 203 et seq.

21 M.6944 *Thermo Fisher Scientific / Life Technologies*.

(46) The Commission has previously found that contract manufacturing of FDPs consists in the manufacturing of FDPs under contract and on behalf of third party pharmaceutical companies which may or may not include packaging.[22] The third party (i.e. the customer of the contract manufacturer) then commercializes the FDPs under its own label or brand.

(47) The Commission has previously considered a differentiation between API and FDP manufacturing. The Commission has also considered several possible segmentations of the latter, corresponding to the pharmaceutical form which is manufactured and the conditions of manufacture. However, the Commission has so far left the market definition open.[23]

(48) The Commission considers that the precise market definition can also be left open for the purpose of this decision because it would not change the outcome of the competitive assessment.

#### *4.4.2. Geographic market*

(49) The Parties claim that the markets for contract manufacturing and packaging are global in scope.[24]

(50) The results of the market investigation support the Parties' claim that competition for contract manufacturing takes place on a global level. The Commission therefore considers that the market for contract manufacturing of pharmaceuticals is likely to be at least EEA-wide in scope. For the purpose of this decision, the exact geographic scope can however be left open because it would not change the competitive assessment.

## 5. COMPETITIVE ASSESSMENT

### 5.1. No horizontal overlaps

(51) The Parties have no overlapping activities. Therefore, no horizontal concerns arise from the transaction.

### 5.2. Vertical relations

(52) Table 1 below shows the vertical links between the Parties' activities and the respective market shares on a global basis. In all these markets, Thermo Fisher is the upstream provider of inputs and Patheon a downstream purchaser. This overview shows that while Thermo Fisher's market shares are not negligible in several of the affected markets, Patheon's market shares are always significantly below [10-20]% with the exception of contract manufacturing of FDPs in softgel form, where it reaches global market shares of [10-20]%. Assuming EEA-wide markets, Patheon's market shares remain below [5-10]% in all plausible markets.

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22 M.7975 *Mylan / Meda*, paragraph 601; M.5953 *Reckitt Benckiser / SSL*, paragraph 63; M.6613 *Watson / Actavis*, paragraph 123.

23 M.7975 *Mylan / Meda*, paragraph 601; M.5953 *Reckitt Benckiser / SSL*, paragraph 63; M.6613 *Watson / Actavis*, paragraph 123.

24 Form CO paragraph 6.35.

**Table 1:** Overview of vertical links and respective global market shares of the Parties[25]

| **Patheon** / **Thermo Fisher** | *Contract manufacturing of FDPs* | *Pharmaceutical development services* | *Contract services for chemical APIs* | *Contract services for HAPIs* | *Contract services for bio-pharmaceuticals* |
|---|---|---|---|---|---|
| *Cell cultures* | [0-5]-[5-10]%* / [30-40]%* | n/a | n/a | n/a | [5-10]% / [30-40]-[40-50]%* |
| *SUT* | [0-5]-[5-10]%* / [40-50]% | n/a | n/a | n/a | [5-10]% / [40-50]% |
| *Ion chroma-tography* | [0-5]-[10-20]%* / [70-80]% | [5-10]% / [70-80]% | [0-5]% / [70-80]% | [0-5]% / [70-80]% | [5-10]% / [70-80]% |
| *Molecular biology* | [5-10]% / [30-40]% | [5-10]% / [30-40]% | n/a | n/a | [5-10]% / [30-40]% |

* Actual market shares depending on specific (sub)market.

### *5.2.1. Customer foreclosure unlikely*

(53) Customer foreclosure may occur when a supplier integrates with an important customer in a downstream market and would be in a position to restrict access of upstream competitors to a significant customer base. The Commission examines first the ability of the merged entity to foreclose upstream competitor's access to clients downstream; second, whether the merged entity would have an incentive to foreclose competitors; and third, if such a foreclosure strategy would have a significant detrimental effect on customers.[26] Competition concerns are likely only to arise in cases where all three conditions are fulfilled.

(54) The ability to foreclose an upstream competitor is closely linked to the market power on the downstream market. In order to raise concerns, the merged entity must be an important customer in the downstream market; otherwise it cannot exercise market power in these markets.

(55) The market shares of Patheon in all plausible downstream markets are significantly below the 30% threshold under which typically no competition concerns arise in vertical relations.[27] In fact, Patheon's shares are limited to less than [5-10]% in case of EEA-wide markets. Therefore, regardless of the precise delineation of the downstream market, Patheon is unlikely to possess market power.

25 Source: Data provided by the Parties (Form CO Annex 14).

26 Commission Guidelines on the assessment of non-horizontal mergers (OJ C 265, 18.10.2008, p. 6), paragraph 58 *et seq*.

27 Commission Note on simplified procedure (OJ C 366, 14.12.2013, p. 5), paragraph 5(c)ii.

(56) In addition, the results of the market investigation show that customers of CDMOs typically have an important role of defining the precise input materials used in the production process. This limits the possibilities of the merged entity to restrict the use of certain inputs from other suppliers even further.

(57) Finally, Patheon is a small customer accounting for less than [0-5]% of total purchases in any of the affected markets with many other major CDMOs like Catalent, Lonza, Vetter and others as well as pharmaceutical companies purchasing. Therefore, even if it would switch procurement from third party providers to Thermo Fisher, this is unlikely to have a significant effect on the overall market which could in turn lead to higher prices for consumers.

(58) In light of the above, the Commission considers that the merged entity would lack sufficient market power to engage in any type of customer foreclosure that could harm upstream competitors. Even assuming a scenario in which the merged entity could engage in customer foreclosure, the effect of such a strategy would not have a significant effect for consumers because of the limited size of Patheon's current purchasing. Therefore, the proposed transaction does not raise customer foreclosure concerns.

*5.2.2. Input foreclosure unlikely*

(59) Input foreclosure may occur when a downstream customer integrates with an upstream provider and the combined entity would restrict access of downstream competitors to input from upstream providers. Here again, the Commission assesses the ability and incentives of the merged entity to engage in foreclosure strategies as well as the effect of such a strategy on competition downstream.

5.2.2.1. Cell culture products

(60) In the markets for cell cultures, sera and media can be distinguished. Within sera, affected markets arise only in the potential bioproduction sub-segments of Australian and New Zealand foetal bovine serum (FBS), porcine sera, and equine sera as can be seen in Table 2 below.

(61) Within the relevant markets for bioproduction media, overall market shares are around [30-40]% globally and on a possible EEA-wide market as can also be seen from Table 2 below. Within the EEA, the highest market shares are in the market for dry media for bioproduction, reaching slightly above [30-40]%.

**Table 2:** Market shares for Thermo Fisher in relation to cell cultures (bioproduction)[28]

| | Sera type | Global market shares | EEA market shares |
|---|---|---|---|
| Sera | All types of sera | [20-30]% | [20-30]%[29] |
| | Australian and New Zealand FBS | [10-20]% | [30-40]% |
| | US and Canadian FBS | [5-10]% | [20-30]% |
| | South American FBS | [5-10]% | [0-5]% |
| | New Zealand Adult Bovine sera | [5-10]% | [0-5]% |
| | Porcine sera | [60-70]% | [40-50]% |
| | Equine Sera | [30-40]% | [30-40]% |
| | | | |
| Media | All types of media | [30-40]% | [20-30]% |
| | Liquid media | [20-30]% | [20-30]% |
| | Dry media | [30-40]% | [30-40]% |
| | Custom media | [20-30]% | [10-20]% |
| | Proprietary media | [30-40]% | [30-40]% |
| | Standard basal media | [20-30]% | [30-40]% |
| | Chemically defined media | [40-50]% | [20-30]% |
| | Process liquids | [10-20]% | [10-20]% |

(62) In all markets for the different types of cell cultures, strong global competitors exist, including Merck-Sigma, GE, Moregate, and others.

(63) While the market investigation indicated that switching suppliers for a specific production line of a CDMO is not always easy because all inputs require specific qualifications and also typically need the consent of the final customers, the broad majority of respondents to the market investigation replied that they are in any event multi-sourcing critical inputs. At least two additional suppliers exist for all important inputs within the EEA between which producers can switch. The fact that other CDMOs could substitute Thermo Fisher's cell culture products with products from other suppliers would preclude any foreclosure attempt of the merged entity. None of the respondents to the market investigation mentioned specific concerns in relation to cell culture products.

(64) In addition, Patheon accounts for less than [0-5]% of total purchases of cell culture products, leaving it highly unlikely that the merged entity would have any economic incentive to foreclose other market participants.

(65) Finally, cell cultures typically constitute only a small percentage of purchases of a CDMO. […][30]* estimates that its purchases of all types of media constitute less

[28] Source: Data provided by the Parties (Form CO Table 6.13). As the market shares in Table 2 indicate, the transaction does not give rise to affected markets in some overall markets and in some market segments. The market shares regarding these markets are nonetheless included in the table for clarity.

[29] EEA-wide market shares for all types of sera (bioproduction) calculated based on individual market sizes and Thermo Fisher sales provided by the Parties.

[30] * Should read: Patheon

than [0-5]% of its total purchasing. As a result, even a material increase in prices would not represent a significant cost factor.

(66) Given the possibility of other CDMOs to switch to other suppliers and the lack of specific customer concerns in relation to cell culture products, the lack of incentives for the merged entity to foreclose other downstream competitors, and the limited effect of any foreclosure effect, the Commission considers that the transaction will not lead to input foreclosure effects in any market for cell culture products, whether on an EEA-wide or global basis.

#### 5.2.2.2. Single use technologies

(67) Thermo Fisher is only one of several suppliers of SUTs. Its market shares are always below [30-40]% in any considered global or EEA-wide market with the exception of single use bags, where it reaches [30-40]% in the EEA and [40-50]% globally. The second largest supplier, Sartorius, is of comparable size, supplying about 30% of the market on an EEA-wide as well as global basis. Other market participants can and do produce similar products of similar quality, limiting Thermo Fisher's market power in this market.

(68) In addition and in any event, SUTs are used for multiple purposes and Patheon accounts for less than [0-5]% of total purchases of each of the products. Therefore, it seems highly unlikely that the merged entity would have any economic incentive to limit third party access to these products.

(69) Moreover, SUTs account for only a small part of procurement costs of a CDMO. Patheon estimates that single-use bags constitute less than [0-5]% of its own total procurement. Therefore, even a material increase in prices would not appear to represent a significant cost factor for other downstream competitors.

(70) No concerns were raised in the market investigation in relation to SUTs.

(71) In light of the above, the Commission considers that the transaction will not lead to input foreclosure effects in any plausible market for SUTs, whether on an EEA-wide or global basis.

#### 5.2.2.3. Mass spectrometry and chromatography

(72) The transaction leads to only two affected markets in relation to instruments and none in relation to consumables. Based on an EEA-wide market, Thermo Fisher's market shares reach [30-40]% for mass spectrometry instruments and [50-60]% for ion chromatography instruments. Based on a potentially global market, mass spectrometry instruments would not be affected with market shares slightly below [30-40]% while ion chromatography instruments would reach [70-80]%.

(73) The Parties submit that despite Thermo Fisher's significant share in the market for ion chromatography instruments, especially outside the EEA, no risk of foreclosure arises. On the one hand, the Parties argue that other important

producers like Metrohm exist that could easily meet increased demand from other CDMOs. On the other hand, the Parties argue that ion chromatography is only of peripheral importance for other CDMOs. In spite of the Commission's finding of a separate market for ion chromatography instruments in previous cases, CDMOs can and do use alternatives such as titration or ion selective electrodes for their procedures.

(74) The Commission notes that at least one alternative supplier for ion chromatography instruments is active in the EEA, accounting for 45% market shares. In addition, no respondent to the market investigation indicated a specific dependency on ion chromatography instruments supplied by Thermo Fisher. Indeed, no concerns were raised in the market investigation in relation to ion chromatography instruments.

(75) In addition, ion chromatography instruments are used for multiple purposes and Patheon accounts for less than [0-5]% of total purchases. Therefore, it seems highly unlikely that the merged entity would have any incentive to limit third party access to these products.

(76) Moreover, ion chromatography instruments account for only a small part of procurement costs of a CDMO. Patheon estimates that these instruments constitute only [0-5]% of its own total procurement. Therefore, even a material increase in prices would not represent a significant cost factor for other downstream competitors.

(77) In light of the above, the Commission considers that the transaction will not lead to input foreclosure effects in this market, whether on an EEA-wide or global basis.

#### 5.2.2.4. Molecular biology

(78) Within the area of molecular biology, several affected markets arise where Thermo Fisher's market shares are higher than [30-40]% on an EEA-wide or global basis. Table 3 provides an overview of all relevant markets and market shares.

**Table 3:** Molecular biology market shares[31]

| **Molecular biology area** | **Product Type** | **Thermo Fisher Market Shares** | |
|---|---|---|---|
| | | **Global** | **EEA** |
| Delivery | Transfection reagents | [40-50]% | [30-40]% |
| Nucleic Acid synthesis | Oligos | [0-5]% | [0-5]% |
| Cloning | Cloning enzymes | [10-20]% | [10-20]% |
| | PCR Cloning | [30-40]% | [30-40]% |
| NA purification | Horizontal gel boxes (electrophoresis gel boxes) | [5-10]% | [5-10]% |
| | Liquid-based and column-based purification kits | [0-5]% | [0-5]% |
| | Magnetic bead-based purification kits | [0-5]% | [0-5]% |
| | Agarose gel | [20-30]% | [20-30]% |
| | Molecular weight standards | [30-40]% | [30-40]% |
| NA amplification | Thermal cyclers | [20-30]% | [10-20]% |
| | qPCR instruments | [50-60]% | [30-40]% |
| | Taq polymerase | [10-20]% | [20-30]% |
| | High fidelity polymerase | [30-40]% | [40-50]% |
| | Hot start polymerase | [20-30]% | [30-40]% |
| | Other speciality polymerase | [5-10]% | [5-10]% |
| | Reverse-Transcriptase ("**RT**") enzymes | [50-60]% | [60-70]% |
| | PCR kits | [5-10]% | [5-10]% |
| | Dye-based qPCR kits | [20-30]% | 10-20]% |
| | Probe-based qPCR kits | [30-40]% | [20-30]% |
| | qPCR assays | [20-30]% | [10-20]% |
| | RT-PCR kits | [20-30]% | [30-40]% |
| | cDNA synthesis | [40-50]% | [50-60]% |
| | Probe-based RT-qPCR kits | [40-50]% | [40-50]% |
| | Dye-based RT-qPCR kits | [0-5]% | [0-5]% |

[31] Source: Data provided by the Parties (Form CO Table 6.51). As the market shares in Table 3 indicate, the transaction does not give rise to affected markets in some market segments. The market shares in these segments are nonetheless included in the table for clarity.

(79) Thermo Fisher is one of several suppliers in all of the markets considered in the table above. It is and remains constraint by other large providers such as Merck-Sigma, Qiagen, Bio-Rad, Agilent, Roche, New England Biolabs, Promega, and others. As already discussed in relation to cell culture products above, the majority of respondents to the market investigation indicated that in spite of restrictions in switching input materials for production purposes, the industry is generally applying multi-sourcing strategies for critical inputs. No respondent to the market investigation indicated a specific dependency on molecular biology products supplied by Thermo Fisher. Several alternatives would remain post-merger and other CDMOs could substitute Thermo Fisher's molecular biology products which would preclude any foreclosure attempt of the merged entity.

(80) In addition, molecular biology products are not only used by CDMOs. Combined with the modest market shares of Patheon overall, the Parties' claim that Patheon accounts for less than [0-5]% of total purchases in each of these markets seems plausible. Therefore, it seems highly unlikely that the merged entity would have any incentive to limit third party access to these products.

(81) Finally, the Parties submit for every affected market within the area of molecular biology that each of the specific products represents typically only a small percentage of the costs of any final product produced by CDMOs like Patheon. Therefore, an increase in prices would not represent a significant cost factor for other downstream competitors.

(82) In light of the above, the Commission considers that the transaction will not lead to input foreclosure in relation to molecular biology products, whether on an EEA-wide or global basis.

## 6. CONCLUSION

(83) For the above reasons, the European Commission has decided not to oppose the notified operation and to declare it compatible with the internal market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of the Merger Regulation and Article 57 of the EEA Agreement.

*For the Commission*

*(Signed)*
*Christos STYLIANIDES*
*Member of the Commission*