

PURCHASE AGREEMENT

Ústav organické chemie a biochemie AV ČR, v.v.i.

With its registered office at: Flemingovo nám. 2, 166 10 Praha 6
IČO (business identification number): 61388963
DIČ (VAT identification number): CZ 61388963
Represented by: Prof. RNDr. Jan Konvalinka, CSc., Director
Bank account: [REDACTED]

hereinafter as the “**Client**”

and

Bruker Scientific LLC

With its registered seat/place of business at: 40 Manning Road Billerica, MA 01821
IČO (Business Identification Number): 04-3275192
DIČ (V.A.T. Identification Number): 04-3275192
Represented by: Afsoon Pajand
Registered in the Commercial Register of Registered at the State of Delaware maintained by Secretary of State, Division of Corporations, Company Registration Number / EIN (Employer Identification Number): 04-3275192, dated 2.21.2018, SR# 20188331490, File # 3329415
Bank account: [REDACTED]

hereinafter as the “**Supplier**”,

the Client and the Supplier hereinafter as the “**Contracting Parties**”

have concluded, in compliance with the provisions of Section 2079 et seq. of the Czech Act No. 89/2012 Coll., Civil Code (“**Civil Code**”), based on the realized public tender called “two (2) TIMS-TOF mass spectrometers” (“**Tender Proceedings**”), this purchase agreement (“**Agreement**”) in the following wording:

1. PURPOSE AND SUBJECT OF THE AGREEMENT

- 1.1. The subject of this Agreement is the Supplier’s commitment to deliver Two (2) TIMS-TOF mass spectrometers to IOCB Boston Branch as specified herein as well as in Appendix 1 to this Agreement (“**Equipment**”) to the the Client and transfer the ownership rights to the Equipment to the Client, as well as the obligation of the Client to pay to the Supplier the agreed price for the duly delivered Equipment in accordance with the conditions set in this Agreement.
- 1.2. A part of the Supplier’s delivery is also to supply all the attachments for the Equipment necessary to fulfill the purpose of this Agreement, including the license to the operating software (as described in this Agreement and the appendices hereto), to transport the

Equipment to the place of performance, to install the Equipment and to put the Equipment into full operation, to train the staff of the Client concerning use of the Equipment in the place of performance in the extent necessary for realization of the purpose of this Agreement, to hand over the documents needed to take over and use the Equipment, and to provide the guarantee service (including free update of the software within the guarantee period).

- 1.3. The Supplier is entitled to use for performance of this Agreement subcontractor(s), whereas the Supplier is obliged to state the list of all subcontractors in Appendix 3 to this Agreement. If the Supplier does not use for performance of this Agreement any subcontractor, then the Supplier is obliged to annex as appendix to this Agreement a declaration of honour stating that the subcontractors shall not be used for performance of this Agreement.

2. PLACE OF PERFORMANCE AND PERIOD OF PERFORMANCE

- 2.1. The place of performance is the Client's registered office, i.e. IOCB Boston Branch, 840 Memorial Drive, Cambridge, MA 02139 (Laboratories of IOCB).
- 2.2. The Supplier shall deliver the Equipment including installation and full commissioning of the Equipment within **1 month** from the effective date of this Agreement.
- 2.3. The Client shall confirm the proper delivery of the Equipment (including installation and putting the Equipment into full operation) in writing on the handover protocol, based on which the Supplier can charge for the delivery of the Equipment and issue the respective invoice (tax document).
- 2.4. The Client is not obliged to accept the Equipment if it has any defects or if the Supplier has not properly fulfilled its obligations stipulated in the Agreement. In such a case, the Client shall inform the Supplier about the reasons for non-acceptance of the Equipment.
- 2.5. Nevertheless, the Client can accept the Equipment even if it has defects or the Supplier has not properly fulfilled its obligations stipulated in the Agreement. In such a case, the Client shall list in the (final) handover protocol all the defects discovered. In that case, the Client is, based on this Agreement, entitled to all claims under this Agreement in connection with the defects listed.
- 2.6. The Supplier shall remove the defects listed in the (final) handover protocol or fulfill other claim arising from defects selected by the Client within **7 working days** from the date of issue of this protocol, if the Contracting Parties do not agree otherwise.

3. THE ACQUISITION OF OWNERSHIP RIGHTS AND THE RISK OF DAMAGE TO THE EQUIPMENT

- 3.1. The Client shall acquire the ownership rights to the Equipment at the moment of its receipt. The Supplier assumes the risk of damage to the Equipment until it is taken over by the Client.

4. THE QUALITY OF THE EQUIPMENT AND ITS DEFECTS

- 4.1. The Equipment shall be supplied in the required quality and shall always:
 - a) have the properties required by this Agreement and its appendices;
 - b) have the properties in accordance with the purpose of this Agreement as it arises from the content of this Agreement;
 - c) be made according to all applicable standards and technological regulations;

- d) be in compliance with applicable legislation; and
- e) be new, unused, not-refurbished (including all parts)

4.2. The Supplier is responsible for proper operation of the Assembly and for the fact that the Assembly is usable for the purpose stated in this Agreement.

4.3. The Supplier is responsible for the defects which the delivered Equipment has at the moment of its take-over by the Client, as well as for the defects of the Equipment, which shall appear during the guarantee period after the Equipment is taken over by the Client.

Quality Guarantee

4.4. The Supplier provides the Client with a quality guarantee to the Equipment (any of its components or accessories) for a period of *12 months* from the date when the Equipment is taken over by the Client and it is confirmed on the final handover protocol. The Supplier is responsible for any defect which appears during the guarantee period on the Equipment.

4.5. The guarantee period is interrupted for the period during which the Client cannot use the Equipment or its part for defects for which the Supplier is responsible.

4.6. If the Equipment which has been handed over is defective, the Client may choose from the following:

- require the removal of the defect within 1 week from raising of the claim by the Client or in any other period agreed by the Contracting Parties;
- require adequate discount from the Purchase Price; or
- withdraw from this Agreement.

4.7. Unless the Supplier removes the defect within the time period set in this Agreement, the Client can, at its discretion, either choose another claim arising from this Agreement or remove the defect on its own or through another party at the expense of the Supplier. In that case, the Supplier is obliged to pay upon request of the Client all the costs incurred by the Client for removal of the defect or in connection with such removal.

4.8. If the Client has selected as a claim arising from defects discount from the Purchase Price, the Client shall propose the amount of discount in writing to the Supplier. Unless the Supplier rejects this proposal in writing within 10 days from its receipt, the amount of the discount proposed by the Client is binding for both Contracting Parties. If the Supplier rejects the proposed amount of discount from the Purchase Price in time and if the Contracting parties do not agree otherwise within 30 days from raising of the claim on discount of the Purchase Price by the Client, the amount of discount shall be determined by an expert selected by the Client from a list of experts. The discount determined by the expert shall be then binding for both Contracting Parties.

4.9. The costs of the expert assessment according to the above stated provision are borne by the Supplier unless it is proven that there was no defect. The Supplier is obliged to pay for such expenses at the latest together with the discount from the Purchase Price.

4.10. The Client undertakes to provide the Supplier with the necessary cooperation within removal of the defects which can be reasonably required, in particular to enable the Supplier works aiming at removal of the defects.

4.11. The Supplier undertakes that he will, within removal of the defects of the Equipment, respect the operating instructions of the Client if they are issued and to proceed in such a manner so as to minimize the interference in the use of the Equipment by the Client and the normal operation of the Client.

- 4.12. The guarantee service is such an activity of the Supplier which prevents the formation of defects of the Equipment and helps to preserve the properties of the Equipment .
- 4.13. The Supplier shall ensure at his expense free guarantee service to the Equipment at the place of installation of the Equipment according to the below stated conditions. The Client shall report the guarantee defects to the following Supplier's email address [REDACTED]
- 4.14. The binding time limits for removal of the guarantee defects:

The guaranteed period for the receipt and acceptance of the reported defect by the Supplier	The guaranteed period for the removal of the defect
7 working days	3 working weeks, if not agreed otherwise by the Contracting Parties

5. OTHER OBLIGATIONS OF THE SUPPLIER

- 5.1. The Supplier is obliged to comply with all obligations included in his bid within the Tender Proceedings even if they are not explicitly expressed in this Agreement.
- 5.2. The Supplier agrees that all information provided to the Client in compliance with this Agreement and Czech legislation can be published by the Client, including this Agreement.
- 5.3. The Supplier undertakes to have an insurance contract, the subject of which is the liability insurance for damage caused by the Supplier to a third party, effective during the installation of the Equipment. The insurance coverage must be at least USD 750.000,- for one claim event. The Supplier must present to the Client the insurance contracts or certificates proving the existence of the insurance in the extent specified in this paragraph upon request of the Client prior to the installation of the Equipment.

6. THE PURCHASE PRICE

- 6.1. The total price of the Equipment and other performance of the Supplier under this Agreement is USD 1,199,999.00 excluding VAT (the "**Purchase Price**"), USD1,274,998.94 (including Massachusetts Sales Tax if applicable) including VAT and USD 74,999.94 (MA sales tax if applicable) VAT.
- 6.2. The Supplier explicitly declares and assures the Client that the Purchase Price includes all the costs of the Supplier associated with the performance of this Agreement. The Purchase Price is final. The Purchase Price includes in particular:
- transport, installation of the Equipment and putting the Equipment into full operation in the place of performance of the Agreement;
 - the remuneration for use of software necessary for operation of the Equipment;
 - training of the staff of the Client concerning use of the Equipment,
 - Client's technical support and consultations for at least 1 year from the effective date of the Agreement on the software,
 - guarantee service (including labour, material and travel and accommodation costs) and upgrade of the software to the Equipment within the guarantee period;
 - the costs of proper packaging;
 - fees;

- h) guaranty to the extent specified by this Agreement;
- i) all other costs and fees necessary for proper fulfillment of this Agreement.

- 6.3. The Purchase Price does not include VAT in accordance with the Act No. 235/2004 Coll., on Value-Added Tax, as subsequently amended ("**Value-Added Tax Act**"); the Purchase Price shall be increased by VAT, which the Supplier will have to pay or declare in any form according to the Value-Added Tax Act, in the wording in effect on the day of taxable supplies. The Purchase Price already includes all the possible taxes and fees that the Supplier may have to pay or declare in any form under any applicable foreign laws.
- 6.4. The Supplier undertakes to inform the Client immediately in writing about the fact that the tax administrator has issued a decision that the Supplier is an unreliable payer in the sense of the provisions of Section 106a of the Value-Added Tax Act. The Supplier is obliged to send this notice to the Client without delay after receiving such a decision of the tax administrator, no matter if this decision has already come into legal force.
- 6.5. The Supplier undertakes to inform without delay the Client in writing about the existence of the final decision of the tax administrator that the Supplier is an unreliable tax payer in the sense of the provisions of Section 106a of the Value-Added Tax Act, about the withdrawal of such a decision of the tax administrator and about the decision of the tax administrator that the Supplier is no longer an unreliable payer in the above-mentioned sense.
- 6.6. The Contracting Parties have agreed that the Client shall pay taxable performance to the Supplier (to a provider of taxable performance) only to the account of the Supplier which is published by the tax administrator in a manner enabling remote access; until the Supplier has provided the number of such a bank account, the obligation of the Client to pay the Purchase Price is not due. This provision shall not be used, if the Supplier is a person who is not registered as value added tax payer in the Czech Republic.
- 6.7. If the Supplier breaches its obligations listed in the preceding paragraphs of this Agreement, the Supplier must pay to the Client a contractual penalty in the amount corresponding to the liability incurred by the Client by virtue of its guarantee (i.e. in the amount of unpaid VAT). The payment of such a contractual penalty does not limit or otherwise affect the right to the compensation for the (also non-material) damage causally connected with the breach of the obligation, to which the contractual penalty applies.

7. THE TERMS OF PAYMENT

- 7.1. The Purchase Price shall be paid by the Client in USD. The Purchase Price shall be paid based on an invoice (a tax document) issued by the Supplier in compliance with this Agreement.
- 7.2. Should the invoice issued by the Supplier not have the adequate particulars required by this Agreement or legislation, the Client is entitled to return it within the due date to the Supplier for completion without exceeding the due date. The period of the due date begins a new once the properly completed and corrected invoice is delivered to the Client again.
- 7.3. **The Particulars of the Invoice**
- The invoice issued by the Supplier according to this Agreement must contain at least the following particulars:
- 7.3.1. a reference to this Agreement;

- 7.3.2. all the details of a proper accounting and tax document required by the relevant legislation (mainly, but not exclusively, the Value-Added Tax Act);
 - 7.3.3. the description of the invoiced Equipment and the invoiced price;
 - 7.3.4. a copy of the respective handover protocol on the takeover of the Equipment by the Client as an attachment;
- 7.4. If the requirements for the issue of an invoice (tax document) based on this Agreement are met, the Supplier is obliged to deliver this invoice to the Client without undue delay, not later than within 3 working days from fulfilment of the respective conditions for issue of the invoice under this Agreement. The invoice issued by the Supplier in accordance with this Agreement is due within 30 days counted from delivery of the invoice to the Client.
- 7.5. If the invoice is issued in accordance with this Agreement, the Client shall pay it by the due date. The Client shall pay the amount owed by sending it to the Supplier's account listed in this Agreement or to another account of the Supplier specified by the Supplier in writing in accordance with this Agreement.

8. SANCTIONS

- 8.1. Should the Supplier be in default with the handover of the Equipment in terms of the time limits set in this Agreement, the Supplier is obliged pay to the Client a contractual penalty in the amount of 0,05 % of the Purchase Price for each commenced day of delay.
- 8.2. Should the Supplier be in default with satisfaction of a claim arising from defects raised by the Client within the time limit for satisfaction of a claim according to this Agreement, the Supplier is obliged to pay to the Client a contractual penalty in the amount of 0.05 % of the Purchase Price, for each commenced day of delay and for each individual case of delay.
- 8.3. If the Client is in arrears with payment of an invoice properly issued by the Supplier and delivered to the Client in accordance with this Agreement, the Supplier is entitled to interest on late payment in the amount of 0.05 % of the amount owed for each commenced day of delay.
- 8.4. Exercise of a claim for contractual penalty does not limit the right on compensation for the (also non-material) damage in the full extent of such a damage.
- 8.5. The penalty payment notice must be sent in writing; the contractual penalty is due within 14 calendar days from the date of delivery of the notice.

9. MUTUAL COMMUNICATION OF THE CONTRACTING PARTIES

- 9.1. All the communication or other negotiations of the Contracting Parties in connection to this Agreement shall be addressed in English to the below-listed representatives of the Contracting Parties according to this Agreement. Should this Agreement require a written form for some communication or other negotiations between the Contracting Parties, such a communication shall be sent through a postal service provider to the registered address of the respective Contracting Party to the attention of the

representative of this party according to this Agreement or handed over to this representative in person against a written confirmation of receipt.

- 9.2. For the purposes of this Agreement, the Client is represented by:

[REDACTED]

For the purposes of this Agreement, the Supplier is represented by:

[REDACTED]

10. AMENDMENTS TO THIS AGREEMENT AND ITS DURATION

- 10.1. This Agreement may only be amended or modified by numbered written addenda signed by both Contracting Parties. The provisions of Section § 558, Subsection 2 of the Civil Code shall not be applied.
- 10.2. This Agreement shall enter into force upon its signing by both Contracting Parties and shall become effective upon its publication in the Register of Contracts under the Act. No. 340/2015 Coll.

10.3. Withdrawal from the Agreement

Should there be a delay in the performance of the contractual obligations of one Contracting Party, the other party is entitled to terminate this Agreement by withdrawing from it in compliance with the provisions of Section 2001 et seq. of the Civil Code. In the event of a substantial breach of contractual obligations, the other party is entitled to withdraw from the Agreement provided that the delayed party is informed about the withdrawal without undue delay following the acknowledgement of the respective breach. If a party does not, in the event of a substantial breach of the Agreement, withdraw from this Agreement without undue delay, it may withdraw based on the same breach by following the procedure applicable for a minor breach of the Agreement. A substantial breach of contractual obligations is particularly, but not exclusively:

- 10.3.1. on the side of the Supplier: if the Supplier does not properly fulfill its duty to handover the Equipment within the time limit under this Agreement;
- 10.3.2. on the side of the Supplier: if the Supplier does not, within the time limit under this Agreement, properly remove defects or satisfy the claims from the defects of the Equipment chosen by the Client based on the defects listed in the handover protocol;
- 10.3.3. on the side of the Client: a delay in the payment of the Purchase Price based on an invoice properly issued in accordance with this Agreement longer than 30 days;
- 10.3.4. on either side: a breach of other obligations, which is considered a substantial breach of contractual obligations by this Agreement.

In the event of a minor breach of contractual obligations, the other party is entitled to withdraw from the Agreement provided that the delayed party does not fulfill its obligation even within a reasonable additional period that has been provided to it.

10.4. The Assignment of the Rights Arising from the Agreement and Set-off

10.4.1. The Supplier is not entitled to assign this Agreement or its part or transfer any of its claims arising from this Agreement or its part to a third party without the prior written consent of the Client.

10.4.2. The Supplier agrees that its claims against the Client arising from this Agreement cannot be unilaterally set off.

10.4.3. The Supplier is aware of the fact that the consent of the Client with the assumption of any debt (obligation) of the Supplier arising from this Agreement by a third party must be given by the Client in writing.

11. FINAL PROVISIONS

11.1. This Agreement as well as any non-contractual obligations related to this Agreement are governed by Czech law.

11.2. The Supplier acknowledges that the Client, as the beneficiary of the project specified above is obliged to comply with the rules of publicity and to promote the Project in accordance with the rules of the Provider.

11.3. Business practices concerning the agreed or follow-up performance do not take precedence over contractual arrangements or provisions of law, even if such provisions do not have overriding mandatory effect.

11.4. If the circumstances after the conclusion of the Agreement change to such an extent that the performance will be more difficult for the Supplier or there will be a gross disproportion between the rights and obligations of the Contracting Parties, it does not affect in any way the Supplier's obligations arising from this Agreement; the provisions of Section 1765, Subsection 1 and 1766 of the Civil Code shall not be applicable and the Supplier, in accordance with Section 1765, Subsection 2 of the Civil Code, assumes the risk of changing circumstances.

11.5. The Contracting Parties exclude the application of the provisions of Sections 1799 and 1800 of the Civil Code on clauses in adhesion contracts.

11.6. Neither of the Contracting Parties is authorized to incorporate any right arising from the Agreement or its breach into a security.

11.7. The presumption of the mail delivery period according to provisions of Section 573 of the Civil Code is not applicable between the Contracting Parties.

11.8. The provisions of this Agreement are severable in the sense that if some of the provisions of this Agreement become invalid, it does not annul the entire Agreement. In such case, the Contracting Parties undertake to replace the invalid provision by a valid one that best meets the intended purpose of the invalid provision. Until then, the relation between the Contracting Parties is governed by applicable legislation of the Czech Republic.

11.9. Any controversy arising out of this Agreement or in connection herewith shall fall within the jurisdiction of the locally competent court based on the place of business of the Client.

11.10. This Agreement has been made in two counterparts, of which the Client shall receive one counterpart and the Supplier one counterpart.

11.11. The following appendices form an integral part of the Agreement: Appendix 1 – Equipment Specification, Appendix 2 – List of subcontractors or declaration of honour of the Supplier stating that the subcontractors shall not be used for performance of this Agreement.

[REDACTED]

Prague

Billerica, MA

**Ústav organické chemie a biochemie AV
ČR, v.v.i.**

Bruker Scientific LLC

[REDACTED]

Prof. RNDr. Jan Konvalinka, CSc.
Director

[REDACTED]

Christopher Swift, Ph.D
Senior Director of Sales, North America

Attachment no 1. Technical specifications

List and description in detail for specifications required to satisfy the analytical performance for LC-IM-MS/MS

Primary application of the 2 systems will be for Multi-Omics LC-IM-MS/MS based mass spectrometry, one focused on Metabolomics and Lipidomics with conventional flow UHPLC, and the second with nanoscale UHPLC (nanoLC) with stage tip-based sample prep and delivery, connecting to a nanoscale ESI ion source front end, which will be focused on Proteomics. The 2 Mass Spectrometers themselves should be identical, and able to be switched over to the other application loading relevant LC-IM-MS/MS methods and connecting appropriate LC / nanoLC as needed, for redundancy and minimization of disruption during maintenance events.

Key performance specifications required are as below:

1. For Metabolomics and Lipidomics the mass spectrometer must be a high speed quadrupole-Time of flight system, itself integrated with an ion mobility separation stage. Front end ionization sources should be a conventional and a Heated ESI/APCI source.
2. For Conventional flow applications, in Metabolomics and Lipidomics, the mass spectrometer will be interfaced to the UHPLC via a Heated ESI (Electro-Spray Ionization) source using a Vacuum Insulated liquid delivery / nebulizer Probe (i.e. "VIP HESI") This is to avoid fragmentation in the LC transfer line before nebulization under a wide range of conventional flow UHPLC conditions.
3. A conventional flow UHPLC (1200 Bar max pressure) is to be provided, with full gradient / method autosampler control, via integrated software control and with common data table view with instrument control software on single data system (eg via tested Plug in). UHPLC system should provide temp controlled autosampler, vacuum degasser, binary pump and thermostatted column compartment.
4. For Proteomics, a nano flow ESI ionization source should be provided, to provide a plug-and-play "zero adjust" emitter and optimized gas flow for nebulization to ensure the nano ESI Taylor cone is shaped for maximum sensitivity and robust sub-1 microliter flow rates. ESI emitter should operate at 0 Volts. This is to allow future simple connection with Capillary Electrophoresis where grounded emitter will not interfere with the Electrophoretic separation.
5. For Proteomics, a nanoscale UHPLC (nanoLC), with use of stage tip based sample prep and delivery into the injection valve shall be provided, for robust nano LC with 30 up to 200+ sample per day methods. The fully integrated nano LC and autosampler, should contain autosampler, degasser, relevant low pressure mixing pumps and high pressure pump for preformed gradient to flow over the column. This should be all in a single unit and operate via the same LC-MS/MS software data system as the Metabolomics system, for ease of use and training. For column flexibility, columns with integrated emitters or else connection via zero dead volume connector to the nano flow ESI ionization source standard emitter shall be available.
6. The LC-IM-MS/MS Mass Spectrometers shall have 60,000 Mass Resolution (FWHM, measured at m/z 1222) available in MS1 and MS2 modes at all times, regardless of MS1 and MS2 (also known as MS/MS) acquisition speed or ion polarity. Increased MS2

acquisition rates must not reduce mass spectral resolution, and system shall be capable of 4D-Proteomics or Metabolomics with MS1 (Parent ion m/z), MS2 (MS/MS based fragmentation spectra m/zs) Chromatographic Retention Time, and Collisional Cross Section (CCS) information being collected. In particular, MS2 spectra collected at high speed (e.g. 150Hz) should still have 60,000 Resolution.

7. Mass accuracy of 0.8ppm with internal standard and <2ppm external standard shall be provided. Flight tube and electronics should be thermally stabilized for long term mass accuracy stability.
8. In "on-the-fly" MS2 mode, high sensitivity analysis (~100% duty cycle) should be possible at high speed (150Hz). This should be done via Parallel Ion Accumulation and Ion mobility separation of "next batch" of ions while the "current batch" of ions scan out of the ion mobility device undergoing Serial Fragmentation (MS2), and on up to 15 precursors per cycle, effectively giving >150Hz MS2 data collection rate but with each fragmentation event using all accumulated 100 ms of the precursor ions (i.e. as if the experiment were run at 10Hz without any parallel ion accumulation).
9. User definable polygon filtering for inclusion/ exclusion of precursors via mass, charge state and collisional cross section additional to active (dynamic) and passive (Specific ion) exclusion lists. This is key for maximization of duty cycle when doing Data Dependent Analysis based MS2 using Parallel ion accumulation and Serial Fragmentation.
10. Collisional Cross Section Values directly obtained from 1/K0 Ion Mobility measured values for use as identification / annotation criteria in all OMICS experiments.
11. Targeted Analysis (Parallel Reaction Monitoring, PRM) should be available. Ion selection specificity should achieved with Retention time, quadrupole *and* ion mobility isolated precursors for the MS2 experiment. Duty cycle should be maximized with parallel ion accumulation and serial fragmentation experiments, for multiple simultaneous precursor PRM experiments, and application-wise this is for in both small molecule (Metabolite / Lipid) and larger MW Peptide experiments. This mode is for targeted compound quantification and allows the same Mass Spectrometer to do discovery (untargeted) Metabolomics and Lipidomics and then have easy method transfer for (targeted) quantification experiments.
12. System should be highly rugged with *orthogonal* ion injection from ESI desolvation unit in vacuum, into the Mass Spectrometer ion optics – This is to prevent neutrals and solvents from prematurely contaminating the system
13. MS systems should be modular where possible to be optionally field upgradable for enhanced dynamic range (higher ion capacity mobility separations) and even higher speed versions at a later date to extend relevant cutting edge performance.
14. Untargeted and Targeted Metabolomics and Lipidomics comprehensive software package to be provided. Untargeted Analysis: Annotation using RT, CCS, Exact Mass MS1 and MS2 and also isotope fidelity. Statistics tools for cohort comparisons (Supervised and non supervised workflows), Kendrick plots for use in Lipid annotations for outlier detection. Connection using calculated empirical formulae from raw data to public databases for compound targets, followed by insilico fragmentation and

matching back on to acquired MS2. Targeted Analysis: PRM type targeted experiments where ion targets are specified with Retention time, Collisional Cross Section and precursor m/z windowing. Options for Flux analysis, internal and external standards, calibration curve generation and full user control on target transitions.

15. Open data format for Metabolomics and Proteomics data files shall be provided. This is for user flexibility to allow use of open source and 3rd party software, e.g. for database searching of data-dependent MS2 (“DDA”) as well as data independent MS2 (“DIA”) while utilizing the Collisional cross Section information provided in the 4D experiment. Compatibility should be demonstrated for MS-DIAL, PEAKS, MaxQuant, dia-NN, MS Fragger, Pro-Lucid, Skyline, Byonic etc..
16. Optional Real-time comprehensive Proteomics software and computing hardware to be proposed. Search computer should have 4000 GPU array at minimum for the real time searching. This would be for real-time database searching in “DDA” mode but with use of Collisional Cross Section information in the search, and to allow immediate access to results on run completion. Searched results on QCs and Blanks shall inform the instrument via yes/no decisions on user-defined success criteria, whether to continue to run the sample batch. “DIA” data may also be searched in real time on the same computer hardware.
17. Nitrogen Generators to be provided, 1 for each Mass Spectrometer system sized appropriately for UHPLC and nano HPLC operation.

Software License Agreement:

The Supplier grants to the Client the right to use the software to the extent necessary for the fulfillment of the purpose of this Agreement from the moment of acquisition of the ownership right to the Equipment by the Client. The Supplier grants to the Client a non-exclusive, territorially and time-indefinite license to use the software.

The Supplier declares that the Client will not be obliged to undertake any paid modifications or software updates that would condition the fulfillment of the purpose of this Agreement and the functionality of the Equipment. The Supplier undertakes to upgrade the software during the guarantee period free of charge. The Supplier declares that it is entitled to grant to the Client a license authorization to the extent specified above.

The Supplier declares that the Equipment meets the above technical parameters, while the exact specification of the Equipment (including the specification of the entire Assembly) is stated by the Supplier below:



Technical Specification Review and Supplier Response



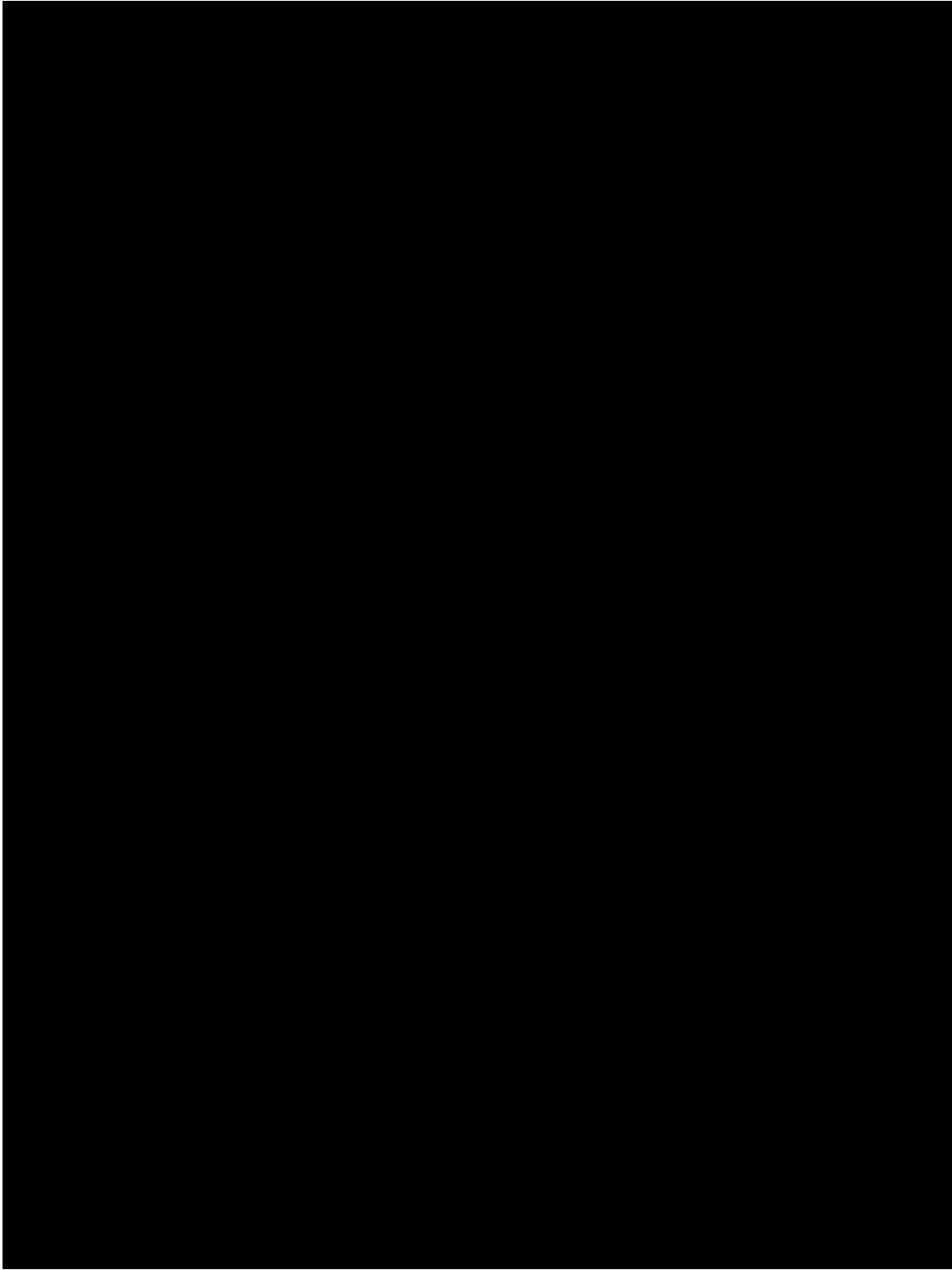
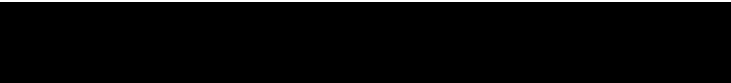
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Appendix 2 – List of subcontractors or declaration of honour of the Supplier stating that the subcontractors shall not be used for performance of this Agreement

