

## IISER PUNE

### Technical Committee meeting minutes for Procurement of Automated peptide synthesizer

#### Members present:

- 1) Prof: Ramakrishna G. Bhat
- 2) Prof. Jeetender Chugh
- 3) Prof. H. N. Gopi

#### Prologue:

An open domestic / global tender notice was issued on CPP portal and institute's website on **04/08/2023** for Procurement of **Automated peptide synthesizer** under two-bid system. A pre-bid meeting with the vendors was arranged on **11/08/2023** at IISER Pune via Zoom. In response, the following agencies have submitted bid documents.

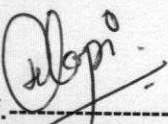
1. Labindia Analytical Instruments Pvt. Ltd
2. Biotage India Pvt. Ltd

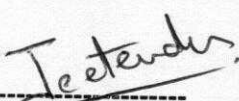
#### Analysis:

The committee met on 18/09/2023 to evaluate the technical specifications of the **Automated Peptide Synthesizer** quoted by the agencies mentioned above. A detailed comparison of the bids is summarized and attached as Annexures A, along with the marking system. The committee found that M/S Biotage India Ltd meets the technical requirements as set out in the specifications. Based on the technical evaluation, Labindia Analytical Instruments Pvt. Ltd has been rejected

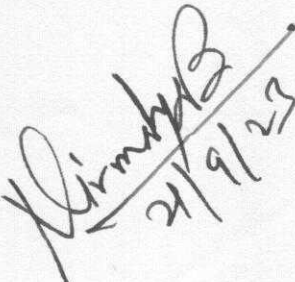
#### Recommendations:

The committee recommends that the commercial bids of M/s **Biotage India Ltd** vendor may now be opened.

Prof.   
(Member)

Dr.   
(Member)

Prof.   
(Chair)

  
21/9/23

## Annexure-A

### Detailed Technical Comparison (Qualifying marks $\geq 80$ out of 100)

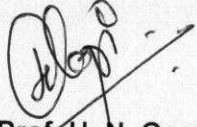
	Description	Marks	Biotage
1.	Fully automated Peptide Synthesizer to support solid phase synthesis of peptides using Fmoc synthetic strategy.	5	5
2.	System should support microwave or IR assisted Fmoc solid Phase Peptide Synthesis with all types of coupling reagents	5	5
3.	System should support Fmoc/t-Boc, peptoid, PNA and combinatorial chemistry, organic chemistry or solution phase peptide synthesis.	10	10
4.	The system should be capable of providing microwave/IR for peptide couple reactions including difficult sequences consisting of sterically hindered amino acids with high purity of crude peptides. The system must be programmable for both deprotection and/ or peptide coupling reactions	0	10
5.	Heating range from ambient temperature to 90 °C or more. Capable of heating the reaction mixture even up to 90 °C within 30 sec.	5	5
6.	The system should accommodate the resin scale ranging from 0.01 to 2 mmol or more	5	5
7.	The system should have at least 27 or more amino acid positions to accommodate non-natural amino acids or special reagents. The system must also be capable to prime free delivery of expensive non-natural amino acid to reaction vessel.	(Satisfied for 27 aa position and not satisfied for prime free delivery 2	5
8.	All the steps like deprotection, coupling, washing should be done automatically.	5	5
9.	The system should have suitable in-built temperature sensors for accurate measurement of the temperature of the reaction vessel fluid.	5	5




10.	The system should have suitable means to stir the resin such as vortex or oscillation mixing or stirring or nitrogen bubbling, or both stirring and nitrogen bubbling.	2	5
11.	The size reactor vials should be ranging from minimum 5 mL to 30 mL or more for peptide synthesis with the provision of more than three activator and activator base bottles of size more than 100 mL to support the use of different activators or N-terminal capping in a single sequence without any need to pause the instrument.	0 (30 and 125 ml)	5
12.	The system should have a suitable controller such as in-built Touch Screen or higher end, wireless large screen Pad, Laptop or desktop computer to operate the system	5	5
13.	The system must compatible for customise the methods as well as use pre-defined methods for peptide synthesis. The software should have provision for directly making sequences using amino acids with modified side chains.	5	5
14.	The system should support the use of wash solvents like DMF, NMP DCM etc. Apart from these bottles, there should be a separate bottle solely dedicated for using deprotection solution.	2	2
15.	The software should be compatible to support programming for on resin branching, cyclization and other modifications	3	3
16.	The software should support on resin one pot synthesis of cyclic peptides, branched peptides and peptide with more than 50 amino acid sequence with good yield and purity.	2 (purity is compromised in the offered system)	5
17.	The system may have syringe pump or valves to control liquid handling. In case of valve based system adequate number of Extra set of valves should be quoted as spares for trouble free operation	2	2
18.	The system should have automatic detection system in case of air bubbles or any other defect in amino acid delivery & level detection in waste reservoir	2	2

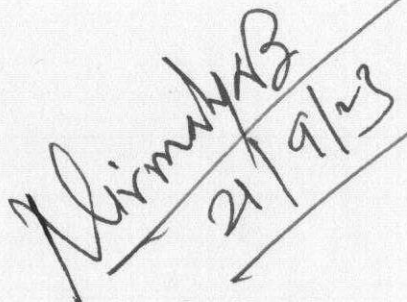
19.	The solvent consumption should be less than 30 ml per cycle for 0.1 mmol or less resin scale	0 (required 32 ml mentioned in the catalogue)	5
20.	The system should be capable of self-diagnostics and automated cleaning routines. The system should also be capable of self-react if any man-made or mechanical errors.	1 (not properly mentioned)	2
21.	A vacuum pump should be provided with the system as accessory	2	2
22.	Two years Warranty	2	2

Total marks to be qualified are 80: The score for Lab India is 75. Additionally, in their offer, they stated, 'You must order the system options for different configurations,' which is not very clear. In comparison, Biotage satisfied the technical specifications, order may be placed to Biotage India limited.

  
Prof. H. N. Gopi  
(Member)

  
Prof. Jeetender Chugh  
(Member)

  
Prof. Ramakrishna G Bhat  
(Chair)

  
Nirmalya B  
21/9/23