



Made in Germany

K & A

LABORGERAETE

Specifications Submission Sheet

Offer 345/87/2009:

Date: 13/06/2009

Item No.	Name of Goods or Related Service	Country of Origin	Make and Model (when applicable)	Full Technical Specification and Standards
1	2	3	4	5
01.01	Primer Synthesizer, accessories and spares	Germany	<p>Make: K&A Laborgeraete GbR</p> <p>Model: H-16-custom</p>	<p>Brand new Primer (DNA) Synthesizer for high throughput synthesis application must suitable for creating RNA, LNA and all kind of wobbles direct on the instrument (also premixed wobbles possible).</p> <p>Number of column 16 with 16 base position free scaleable synthesis size from 5nmol to 40µmol.</p> <p>Length of oligo synthesis 200 mer.</p> <p>Standard or univereal CPG support possible</p> <p>The possibility of adding new synthesis when one ore more of the column positions become free during the process.</p> <p>Up to 16 different Oligonucleotides should be capable to synthesize parallel.</p> <p>Amidite positions: some versions we prefer:</p> <ol style="list-style-type: none"> 10 standard Amidite positions for 1gramm or 2 gramm screw bottles and 4 Amidite positions for 4 ml screw bottles should allow to use various modifications. Reagenz positions 7 (ACN, ACT, CapA, CapB, TCA, OXI and one additional S1) 8 standard Amidite positions for 1gramm or 2 gramm screw bottles (8 is minimum for making RNA) and 6 Amidite positions for 4 ml screw bottles should allow to use various modifications. Reagenz positions 7 (ACN, ACT, CapA, CapB, TCA, OXI and one additional S1) 10 standard Amidite positions for 1gramm or 2 gramm screw bottles and 6 Amidite positions for 4 ml screw bottles should allow to use various modifications. Reagenz positions 6 (ACN, ACT, CapA, CapB, TCA, OXI). The additional reagenz position S1 you can have together with mix chamber position for wobbles (mixed directly at the instrument); but because of a lot of amidite positions not always necessary. <p>Other versions possible!</p>

			<p>Synthesis should capable to done both system with PC</p> <p>Synthesis Range : Wide synthesis range from 5nmol – 40 µmol per column.</p> <p>Synthesis time : 16 couplings in 6 minutes-16 Oligo-synthesis in one run, 20 unit Poly-T in 1 hour 45 minutes in the fast program and up to 2 hours in the high quality program.</p> <p>Total solvent consumption : In the standard program; only 1.2ml total solvent consumption per coupling and in the high quality program; maximum 2ml total solvent consumption per coupling.</p> <p>No pump necessary.</p> <p>Variable flow rates and times in each individual program step.</p> <p>System should capable to direct transfer from and to the PC of sequences, program, protocols from database to the synthesizer.</p> <p>After start of the synthesis, no PC necessary.</p> <p>Online DMT trityl process monitoring.</p> <p>Minimal reagent consumption system with multi valve block system.</p> <p>Individual process control: Each individual column should be monitore by DMT. The entire synthesis process is thus constantly under review. User friendly monitoring control.</p> <p>Ready to use synthesis columns available at our company and many other suppliers (ABI style) worldwide. No preparation of CPG at the instrument necessary.</p> <p>High degree of user-friendliness and ease of maintenance: No moving parts like sliders. Maintenance time about 1 hour per month.</p> <p>Direct data transfer from PC: The 16 –column Primer (DNA) Synthesizer should capable to operate as stand-alone mode or with various software via PC. Direct transfer of sequences from database into the synthesizer should be possible.</p> <p>Wide range of software should be available.</p> <p>User friendly Synthesize manager software should be supplied with the system.</p> <p>The software should be capable to controlling the workstation with 16 - column modules.</p> <p>Software adaptation should also be possible at any time according to user requirements.</p> <p>DNA, RNA, Modifications, Wobbles, S-Oligos standard protocols and programs are included.</p> <p>Phosphorthioates, Wobbles, premixing of various modifiers should be allocated to specific coupling programs by modifier management software.</p> <p>Simple and rapid setting, importing and allocation of synthesis programs and sequences.</p>
--	--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>01.02</p>	<p>PC</p>			<p>Prime and auto print functions should also be possible.</p> <p>DMT monitoring should also possible by Trityle monitoring with minimum level alarm.</p> <p>Protocols of used syntheses programs and used reagents should be possible by procedure records.</p> <p>Following Items should be included with the Synthesizer: Laboratory silent compressor for the valve block system of the synthesizer.</p> <p>Spare parts should be available for the offered model for at least 10 years.</p> <p>Quality standard should be CE</p> <p>Power supply: 100-240V, 50-60 Hz</p> <p>Specifications of the computer providing with the Primer synthesis machine given bellow or higher: Brand PC, IBM compatible, 1GB RAM, 160-240 GB hard disk, Windows XP or higher, DVD writer, Licensed software with anti virus program, Ethernet card, RS-232 series interface, LCD monitor (17-19"),</p>
<p>01.03</p>	<p>Installation & Training</p>			<p>Practice: Two scientists should be offered on practical in customers facility for at least 3 working days with the cost of suppliers under the proper guidance of the manufacturer of the Primer Synthesizer.</p>
<p>01.04</p>	<p>Spare part kit</p>			<p>Primer (DNA) Synthesizer should come with the spares for complete operation for 2 years:</p> <p>Warranty is 1 year after installation.</p> <p>Notice Requested items from your side:</p> <ul style="list-style-type: none"> - place for the silent compressor under the table max 3 meters from the synthesizer. - 1 m2 space for the synthesizer and the reagenz bottles - argon/nitrogen supply 0,5 bar (0,05Mpa) tubing connector AD=6mm, ID=4mm in max 6 meters - wastebox for used chemicals - 4 pc power supplier/connection 230V for compressor, synthesizer and notebook