



UV Laboratory Reactor System 4

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The standard Laboratory Reactor System 4 is an immersion-type photochemical reactor with implemented magnet-driven circulation pump, which provides a complete mixing of the reaction liquid. The irradiation is effected by means of a medium pressure UV lamp (700 Watt), operated by utilizing a vertically arranged combination-tube (immersion tube / cooling tube combination) immersed into the reaction liquid.

Specific characteristics

- Optical path: < 2cm
- 700 W of electrical power
- Generally adapted for liquid phase photolyses
- Flux domain (liquid reaction systems): mL^{-1} up to a few L h^{-1}
- Efficient for photolyses, sensitized and photochemically initiated reactions
- Sources of irradiation: VUV, UV, VIS
- Efficient thermoregulation possible
- Power supply with stepless regulation

Advantageous applications

- One of the most frequently used reactor configuration at laboratory scale
- Very useful for product analyses, kinetic investigations and quantum yield determinations as well as for chemical process development
- Photolyses and homogeneous sensitized and photochemically initiated reactions

Technical data	
Lamp type	TQ 718
Lamp power	700 W
Doping (optional)	Z1, Z2, Z3, Z4
Total immersion length	370 mm
Immersion length - center of concentration of rays	334 mm
Effective arc length (electrode gap)	97 mm
Average lamp lifetime	approx. 2.000 hours (doped lamps approx. 1.000 hours)
Lamp lifetime warranty	1.000 hours, < 25% intensity drop down in the UVC range (doped lamps 500 hours)
Working volume	750 ml with inserted cooling tube
Connections	1 x screw joint , 1 x NS 29/32, 2 x GL 18
Pump flow rate	approx. 1000 ml/min. at 2000 rpm.
Material of immersion tube	n.a.
Material of cooling tube	Quartz glass, optional borosilicate glass 3.3 (combined tube)
Connection cooling water circuit	Hose olives Ø 10
Power supply	PEVG 10
Mains voltage / Frequency	230 V / 50-60 Hz
Pre-fuse	max. 16 A



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