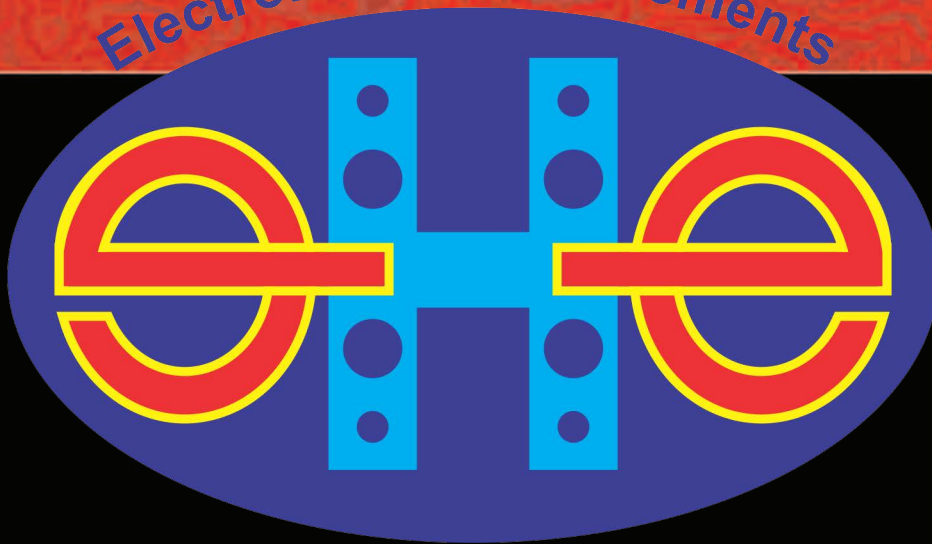


Photochemical MultiRays Apparatus



Electrolux heating elements



PHOTOCHEMICAL MULTIRAYS

The apparatus Photochemical Multirays has been projected for laboratories tests in collaboration with Universities and research centres starting from the researchers needs.

Its peculiarity is the flexibility in fact such apparatus can be adapted to many different type of tests; the use simplicity and the accommodation to the different test needs make this apparatus very useful in laboratories and allows to eliminate long wasting of time.

Constituted by a irradiating chamber with a ventilation system the apparatus has in the middle a rotating system composed by two discs (diameter 194 mm) overlapped, and adjustable in height.

The upper disk is set with 27 holes (diameter 15 mm each) on the circumference; while the lower has got 27 notches that allow to support the quartz test tubes (we can modify the hole diameter on costumer request). All around the rotating system on a diameter of 285 mm are set in a vertical position 10 UV lamps of 15 W each controlled by 5 selectors that command them two by two.

The lamps are fixed on a lamp holder with protection IP 44; where it is easy to access for a fast substitution of the lamps; the aluminium coating on the inner wall of the chamber guarantee a high irradiating power.

Also the possibility to substitute the rotating system with a classic reactor make the Photochemical Multirays a unique apparatus; in fact it is set with holes on the pillar so that one can introduce in the chamber something like magnetic agitators, tubes with gas inside or liquids to make recycling tests.



The most important scientific tests that this apparatus allow to do are:

- Ich Photostability tests
- Photochemical processes
- Photo-oxidation
- Filtered UV radiation with narrow band

The standard apparatus is equipped with:

3 lamps set which include:

- N. 10 UV lamps of 2540 Å (254 nm)
- N. 10 UV lamps of 3100 Å (310 nm)
- N. 10 UV lamps of 3660 Å (366 nm)

- N.1 Rotating system set to hold testing tubes of 15 mm of diameter
- N.1 PVC support disc to use with the reactor without the rotating system
- N.2 socket clamp holder in the reactor chamber
- N.2 fuse of 3.15 Ampere each placed in the plug behind the apparatus

Inner dimensions of the chamber: diameter 285 mm; height 450 mm

Outer dimension of the apparatus: length 455 mm; height 675 mm; depth 640 mm

Weight: 26.5 Kg

Supply voltage: 230 Volt single phase

**The Photochemical Multirays has been used in many tests that has been published.
Here it follows some examples:**

J. Org. Chem. 2001, 66, 8086 – 8093

"Noncommunicating Photoreaction Paths in Some Pregna-1,4-diene-3,20-diones"

A. Ricci, E. Fasani, M. Mella, A. Albini Department Organic Chemistry, University of Pavia, Pavia, Italy

J. Org. Chem. 2001, 66, 41 – 52

"Alkylation of Amino Acids and Glutathione in Water by o-Quinone Methide. Reactivity and Selectivity"

E. Modica, R. Zanaletti, M. Freccero, M. Mella

Department Organic Chemistry, University of Pavia, Pavia, Italy

Photochemistry and Photobiology, 2003, 78(5): 425-430

"In Vitro Phototoxic Properties of Triamcinolone 16, 17-acetonide and Its Main Photoproducts"

G. Miolo, A. Ricci, S. Caffieri, L. Lavorato, E. Fasani, A. Albini

Department Organic Chemistry, University of Pavia, Pavia, Italy and

Department of Pharmaceutical Sciences, University of Padova, Padova, Italy

Tetrahedron 58 (2002) 5039-5044

"The role of stereoelectronic effects on the side-chain fragmentation of alkylaromatic radical cations. The reactivity of 5-methoxy-2,2-dimethylindan-1-ol radical cation"

M. Bellanova, M. Bietti, G. Ercolani, M. Salamone

Dipartimento di Scienze e Tecnologie Chimiche, Università "Tor Vergata", Via della Ricerca Scientifica, I-00133 Rome, Italy

Journal of Photochemistry and Photobiology A: Chemistry 163 (2004) 453-462

"Early stages in the TiO_2 – photocatalyzed degradation of simple phenolic and non-phenolic lignin model compounds"

Dipartimento di Scienze e Tecnologie Chimiche, Università "Tor Vergata", Via della Ricerca Scientifica, I-00133 Rome, Italy

Tetrahedron Letters 44 (2003) 6401-6404

"The role of oxygen acidity on the side-chain fragmentation of ring methoxylated benzocycloalkenol radical cations"

M. Bellanova, M. Bietti, M. Salamone

Dipartimento di Scienze e Tecnologie Chimiche, Università "Tor Vergata", Via della Ricerca Scientifica, I-00133 Rome, Italy

