UV-cabinets for PCR operations

UV-cabinets for PCR operations (**UVC/T-AR, UVC/T-M-AR, UVT-B-AR** and **UVT-S-AR**) are designed for clean operations with DNA samples. They provide protection against contamination.

All models are bench-top type, made of metal framework, glass (or plexiglas) walls and working surface painted with powder enamel or made of stainless steel (See the specifications table on the page 72).

UV-cabinets are equipped with an open UV lamp installed in the upper hood. UV-radiation from the open lamps disinfects the working area inactivating DNA/RNA fragments during 15–30 min of exposure. A digital timer controls duration of the direct UV irradiation. A daylight lamp provides proper illumination of the working surface.

UV-cabinets are equipped with a flow-type bactericidal **UV cleaner-recirculator AR**, which provides constant decontamination inside the cabinet during operation. They are recommended for operations with DNA/RNA amplicons.

UV cleaner-recirculator AR consists of a UV lamp, a fan and dust filters organized in a special body so that a user working with a UV-cabinet is protected against UV light. Recirculator increases the maximum density of UV light making it sufficiently effective for DNA/RNA inactivation. The UV-recirculator processes 100 UV-cabinet volumes per hour, creating permanent aseptic conditions of operation inside the UV-cabinet.

Specially assigned moving tables (with wheel locks) with a drawer are available on request. Two versions:

- **A** **T-4,** for single size UV-cabinets,
- **B** **T-4L,** for double size UV-cabinets (on page 71).

UVC/T-M-AR on the table T-4

Product video is available on the website

Development and evaluation of DNA amplicon quantification video is available on the website

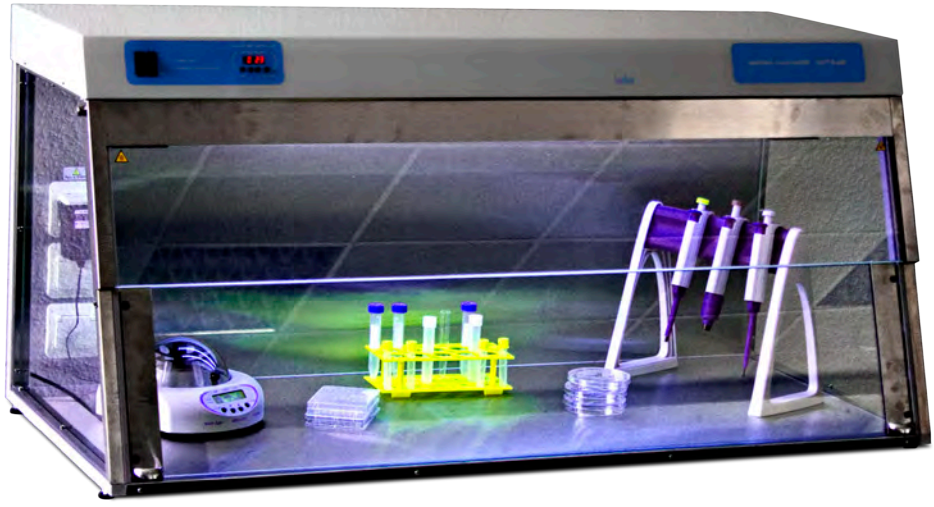
UVC/T-AR

UVT-B-AR on the table T-4

Advantages of Biosan UV-cabinets:
Ozone free high density UV decontamination
Long living UV lamps (8000 hours average)
Automatic switch off of UV-lamps when the protective screen is opened
Bactericidal flow-type recirculator providing permanent decontamination inside UV –cabinet during operation
Shockproof glass walls
Low noise, low energy consumption
Tables for installation of UV-cabinets
UV-cabinets with the bactericidal **UV cleaner-recirculator AR** is the patented Biosan solution

UVT-S-AR on the double size table T-4L

UVT-S-AR with turned on UV



See the Development and evaluation of DNA amplicon quantification. Case study: UV cabinets for PCR operations UVC/T-M-AR and Class II Biological Safety cabinets on page 96

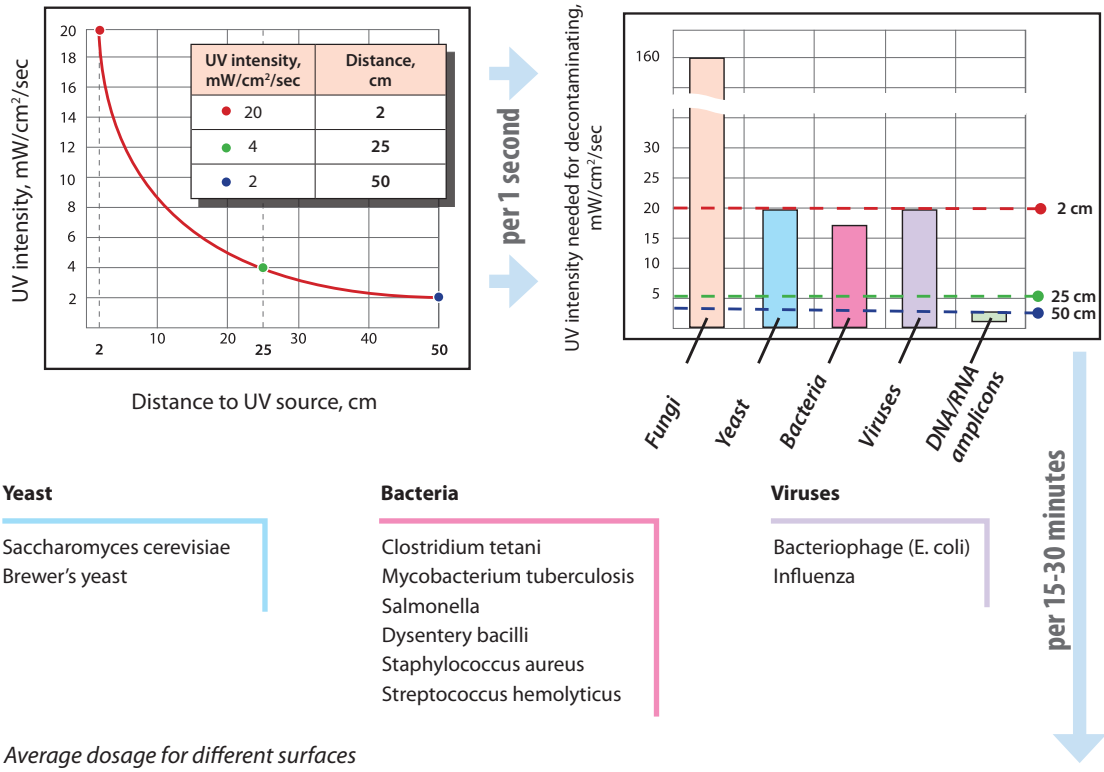
Catalogue number:	
UVC/T-AR	BS-040102-AAA
UVT-B-AR	BS-040109-AAA
UVC/T-M-AR	BS-040104-AAA

Catalogue number:	
UVT-S-AR	BS-040107-AAA
T-4	BS-040101-BK
T-4L	BS-040107-BK

UV-cabinets for PCR operations

Specifications:				
Model	**UVC/T-AR (compact)**	**UVC/T-M-AR (compact)**	**UVT-B-AR (compact)**	**UVT-S-AR (double size)**
Walls material	Plexiglas: Polymethyl methacrylate *ALTUGLAS EX*	Steel, chemical resistant powder coating and glass: *EUROGLASS*, Germany	Steel, chemical resistant powder coating and glass: *EUROGLASS*, Germany	Glass: *EUROGLASS*, Germany
Working surface material	Steel, chemicals resistant powder coating	Stainless steel		
Open UV-lamp	1×25W built-in bactericidal (Philips), TUV25WG13 UV-C			2×30W built-in bactericidal lamps (Philips), TUV30WG13 UV-C
Radiation type	Ultraviolet (253.7 nm), ozone-free			
Digital timer	0–24 hrs / non-stop			
UV-Recirculator	1×25 W (efficiency >99% per 1 hour)			1×30 W (efficiency >99% per 1 hour)
Daylight lamp (for working area illumination)	1×TLD-15W			1×TLD-30W
Thickness of sides	4 mm	4 mm	2 mm	4 mm
Thickness of upper front side	8 mm			
Thickness of the screen	8 mm	4 mm	4 mm	5 mm
Optical transmission	99,99%	95%		
UV-protection film type	Polymethyl methacrylate ALTUGLAS EX	4 MIL CLEAR		
UV protection	>99,90 %	>96%		
Working area dimensions	480×645 mm	480×645 mm	480×645 mm	1200×520 mm
Safety features	Automatic open UV-lamp switch off when screen is open			
Power outlets inside the unit	Inlet for power cords		1 Built-in socket, max. 1000 W	3 Built-in sockets max. 1000 W
Nominal operating voltage	230 V, 50 Hz or 120 V, 60 Hz			
Power consumption (230 / 120 V)	253 V×A (1.2 A) / 372 V×A (2 A)			315 V×A (1.4 A) / 530 V×A (4.5 A)
Overall dimensions (W×D×H)	690×535×555 mm	690×555×555 mm	690×585×555 mm	1245×585×585 mm
Optional table	**T-4** (W×D×H : 800×600×750 mm)			**T-4L** (W×D×H : 1350×600×750 mm)
Weight (net / gross)	26 / 33 kg	32 / 39 kg	35 / 42 kg	58 / 68.5 kg

Germicidal, shortwave (254 nm) ultraviolet energy is used for complete destruction of various biological agents



Yeast

Saccharomyces cerevisiae
Brewer's yeast

Bacteria

Clostridium tetani
Mycobacterium tuberculosis
Salmonella
Dysentery bacilli
Staphylococcus aureus
Streptococcus hemolyticus

Viruses

Bacteriophage (E. coli)
Influenza

Average dosage for different surfaces

Surface	Dosage after 15 min	Dosage after 30 min
Working surface (40-60 cm)	1800-2700 mW/cm²	3600-5400 mW/cm²
Side walls (10-60 cm)	1800-5400 mW/cm²	3600-9000 mW/cm²
Front window (10-60 cm)	1800-5400 mW/cm²	3600-9000 mW/cm²

See the article on page 96 for full information

UVC/T-AR

UVC/T-M-AR