2.4.11 Quartz Microplates

Microplates are increasingly being used in areas such as clinical chemistry and pharmaceutical research. Plastic microplates however are not suitable for all purposes. If chemical resistance, UV transmission, microscopic observation or thermal stability are required, it is better to use quartz microplates. These can be provided to the same basic dimensions as the plastic plates.

The upper part of the microplate is attached directly to the synthetic quartz base using the process of direct fusion. The result of this joining process, which does not use glue or sinter glass is an evenness of the well base, which is less than the wavelength of light. The join has the same high resistance against extreme temperatures and aggressive chemicals as the main body of the quartz itself. Furthermore, this guarantees that each well is completely watertight.

Distinct Advantages

The excellent characteristics of quartz allows tests and measurements with all kinds of solutions under almost any conditions. Quartz microplates are suitable for low temperatures, down to the bottom of the Kelvin scale and can also be used in the high temperature range up to 900 °C. It is the characteristics of this material, which make quartz microplates ideal for re-use. Plastic plates only have limited resistance against aggressive chemicals, are hard to clean and sterilise and quickly lose their shape at high temperatures. Quartz plates have clear advantages in this area. They can be autoclaved and cleaned quickly and without changes to the surface.

Plastic plates are made in one step by an injection moulding process, whereas quartz plates are made in many individual steps – grinding, polishing, boring and fusing. This allows modification for special purposes. For example, the base thickness can be reduced to as low as 0.5 mm while maintaining the highest optical quality. A further reduction to the cover slip thickness of 0.17 mm is possible, in any case, only when combined with a smaller well diameter of about 3 mm. The upper part of the microplate can be manufactured from black quartz for special use in fluorescence applications.

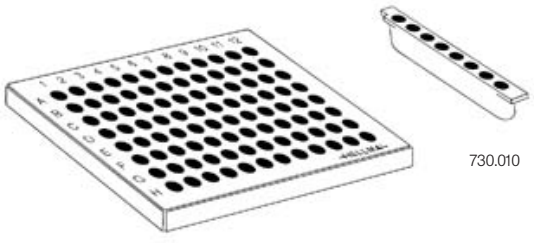
Tip

For some uses, it is necessary to cover the microplate. This can be achieved with a glass plate or with a synthetic quartz plate for the highest optical demands. On request, PTFE opaque foils are also available.

2.4.11 Quartz Microplates

Catalogue Number	Description	Outside Dim. H x W x L mm	Base mm	Wells Ø mm	Wells Depth mm	Wells Volume µl
730.009-QG	Quartz Microplate** with 96 wells Base: Synthetic Quartz Glass	14.5 x 127 x 85.5	2*	6.6	12.5	300
730.009B-QG	Black Quartz Microplate with 96 wells Base: Synthetic Quartz Glass	14.5 x 127 x 85.5	2*	6.6	12.5	300
730.010-QG	Quartz Microplate Strip with 8 wells Base: Synthetic Quartz Glass Important: Please name the manufacturer of the holder	12.4 x 8.9 x 80.5	2*	6.6	10.4	300
730.010B-QG	Black Quartz Microplate Strip with 8 wells Base: Synthetic Quartz Glass Important: Please name the manufacturer of the holder	12.4 x 8.9 x 80.5	2*	6.6	10.4	300
730.011-QG	Quartz Microplate with 384 wells Base: Synthetic Quartz Glass	10 x 127 x 85.5	2*	3.5	8	60
730.035-QG	Quartz Microplate with lid** and sealing foil	14.5 x 127 x 85.5	2*	6.6	12.5	300

QG is synthetic quartz glass with a transmission of over 80% between 200 nm and 2500 nm for an empty cell.
* On request base with reduced thickness down to 0.5 mm available
** Available in Borofloat on request.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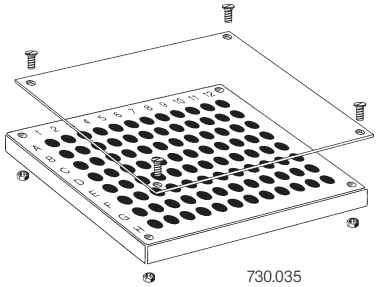
730.009B


730.010B-Q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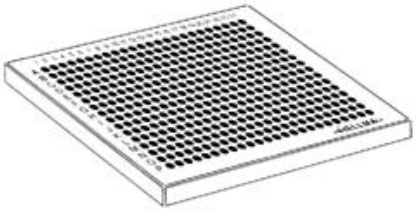
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