

VWR Plates

Plant and seed genomics deep well microplates

As the need to determine the genomic profiles of food and commercial crops expands, the need for reliable methods of extracting plant DNA increases. Standard methods such as bead beating or grinding mills have traditionally been used. When conducted in polypropylene microplates the extreme forces applied by commercially available bead-beating machines can cause damage to the plates leading to cracking, leaking and ultimately, cross-contamination.

Good quality injection-moulded polypropylene microplates for science are, by necessity, usually free of extractable compounds and additives. These compounds would normally be added to the polymer mix used in household moulded products to reduce the brittleness of the moulding, and thus to prevent cracking. For scientific applications, a different approach is required.

VWR Genomics deep well plates have applied modern design concepts and mould analysis to this problem to create a solid, stable and above all, strong, microplate that can withstand the applied forces in bead-beaters whilst maintaining a standard ANSI/SLAS footprint and key dimensions.

By adding reinforced walls to the bottom of the well and backing these with supporting ribs on the underside of the plate, VWR plates have a 2 ml square well block that at last can be used safely and with confidence for plant DNA extraction. The wells have a total volume of 2,12 ml giving a generous working volume of 1,90 ml per well in a 45 mm high plate. The polypropylene used is pure, virgin, extractable-free polymer rigorously tested for leachates by two British universities to ensure you get no contamination from the plate.













Detail of reinforced ribbing on underside of plate.

In addition, new matching cap mats – re-usable friction seals – are available for these plates. The standard EVA cap mat is flexible and easy to apply. For those wishing to freeze the sealed plate at -80 OC, a special polypropylene cap mat is available. This forms a very tight seal, and because it is made of the same polymer as the plate, it expands and shrinks at the same rate, thereby ensuring that the cap mat will not loosen as the temperature changes and preventing cross-contamination between wells. A special cap mat applicator is also available to reduce the risk of repetitive strain injuries whilst sealing large numbers of plates.

Data from a respected UK contract sequencing laboratory has shown that these new plates can withstand 4 minutes of bead-beating at 1750 rpm with a 6 mm steel ball with no apparent damage.

For your convenience, the plates are available in bags of five, packed 10 bags to a case with the option of a sterile version sterilised by gamma radiation. The cap mats are also in packs of 50 and can also be supplied sterile.

ORDERING INFORMATION

All plates and cap mats are DNase-/RNase-free

Description	Pk	Cat. No.
2 ml square well toughened genomics plates	50	732-3331
2 ml square well toughened genomics plates, sterile	50	732-3332
Friction-sealing PP cap mat, square well for 732-3331/3332	50	732-3334
EVA sealing cap, 96 square well to fit 732-3331/3332	50	732-3333
Cap mat applicator for plates	1	732-3335

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