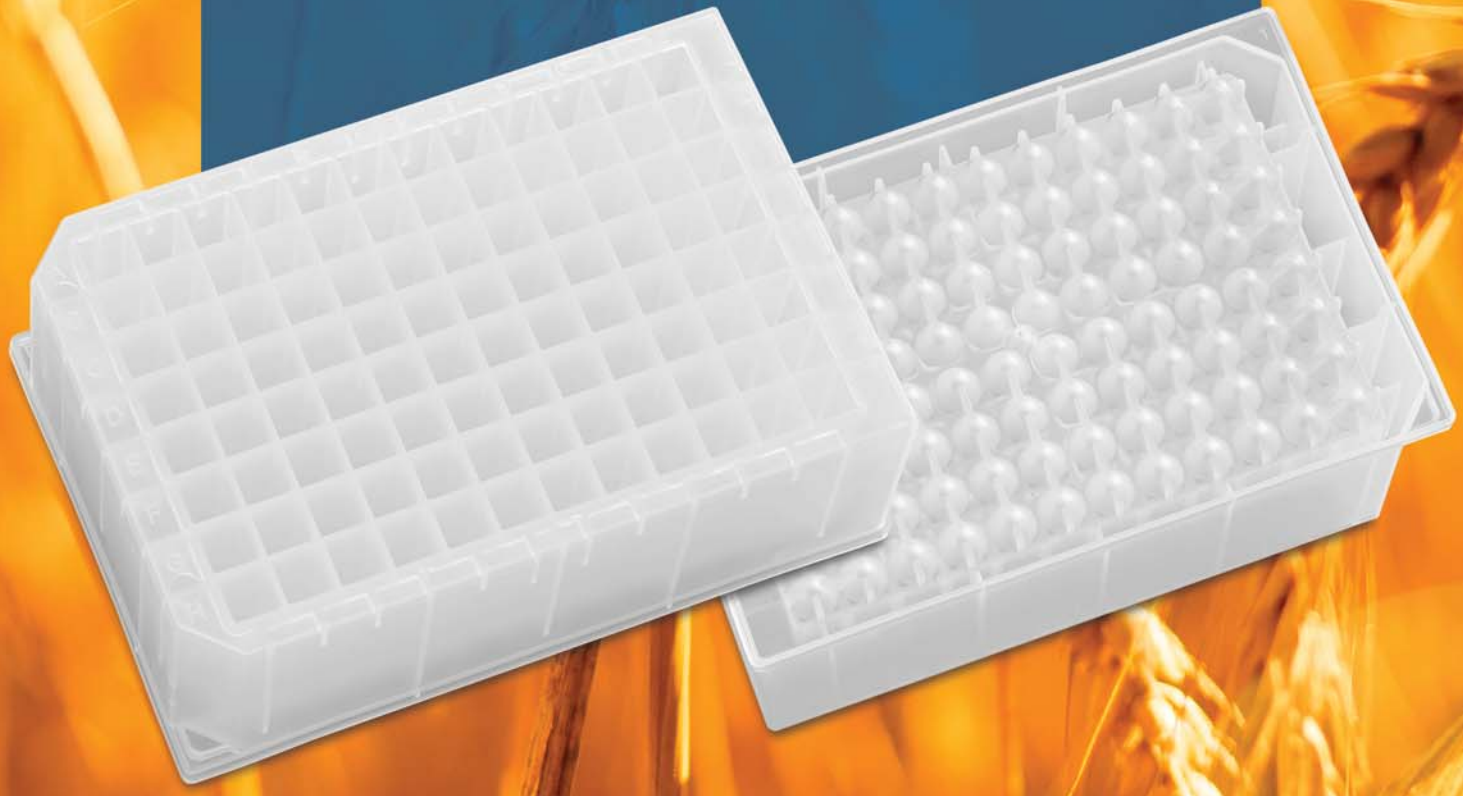
porvair sciences

PLANT AND SEED GENOMICS DEEP WELL MICROPLATES

As the need to determine the genomic profiles of food and commercial crops expands, the requirement for reliable methods of extracting the 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.

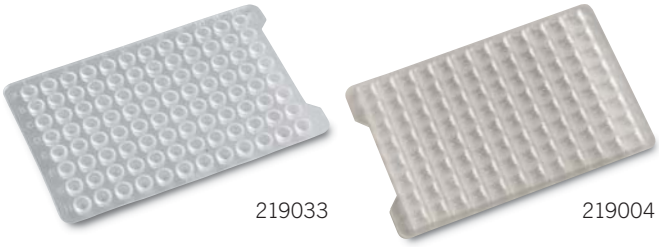
Good quality injection moulded polypropylene microplates for science should be free of extractable compounds and additives. Such additives, designed to strengthen household products, are definitely not suitable for scientific applications and therefore Porvair Sciences have taken a different approach.



With more than thirty years' experience in microplate manufacture, Porvair Sciences has 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, Porvair Sciences has produced 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 1.90 ml per well in a 45mm 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.

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°C, 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, preventing cross-contamination between wells. A special mat-cap applicator is also available from Porvair Sciences to reduce the risk of repetitive strain injuries whilst sealing large numbers of plates.



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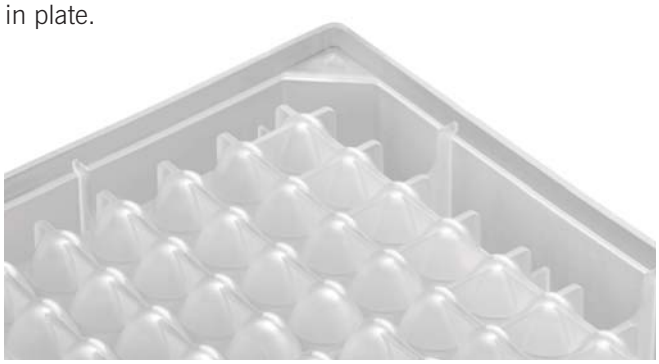
Data from a respected UK contract sequencing laboratory has shown that these new plates can withstand four minutes of bead-beating at 1750 rpm with a 6mm steel ball with no apparent damage.

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 in packs of 50 and can also be supplied sterile.

A magnetic separation plate that exactly fits the engineered underside of these plates is available from L&P Scientific Inc., for those requiring magnetic separation in plate.



Detail of reinforced ribbing on underside of plate

ORDERING INFORMATION

All plates and cap mats are DNA/RNA-ase free

Description	Sterile	Qty/pack	Cat. no.
2 ml square well toughened genomics plate	✖	50	219030
2 ml square well toughened genomics plate	✓	50	219031
Friction sealing cap mat, polypropylene, square well to fit 219030, 219031	✖	50	219033
EVA sealing cap, 96 square well to fit 219030, 219031	✖	50	219004

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Sales and Customer Services

Porvair Sciences Ltd Clywedog Road South Wrexham Industrial Estate Wrexham North Wales UK LL13 9XS
Tel: +44 (0) 1978 666222 Fax: +44 (0) 1978 660007 email: int.sales@porvair-sciences.com www.microplates.com

Accounts

Porvair plc 7 Regis Place Bergen Way Kings Lynn Norfolk UK PE30 2JW
Tel: 44 (0)1553 765500 Fax: +44 (0)1553 765599