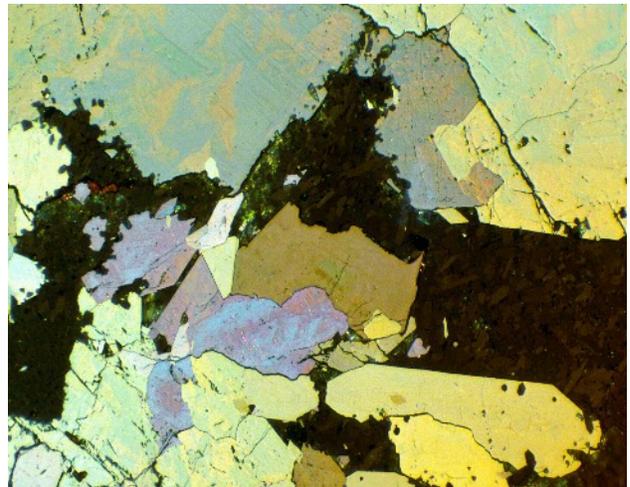




Earth Sciences Bulletin



Equipment
Consumables
Microscopes
Image Analysis
Portable XRF



MetPrep
Supporting
Earth Sciences



Petrology, Mineralogy, Geology

Overview

Having supplied many items of equipment and consumables for over 25 years to the materials market, many of those involved in Earth Sciences are now using our equipment and consumables to aid in their preparation requirements.

Our Brilliant 220 cutter allows both routine sectioning and precision grinding of thin sections. A large range of cutters are also available with a comprehensive range of jigs and fittings to allow clean and safe sectioning in a normal laboratory environment.

When it comes to encapsulation MetPrep offer a wide range of resins including a low viscosity option EPO-FLO an ideal resin for vacuum impregnation. The resin can also be dyed if required. We also offer an innovative vacuum impregnation unit and pressure vessel.

Grinding and polishing can be accomplished by our Saphir range of grinder polishers available in both manual & automatic versions. A comprehensive range of diamond grinding discs, polishing cloths and SiC grits are available.

Diamond is available in both paste and suspensions in various forms and MetPrep also offer Alumina powders in various grades as well as Colloidal Silica suspensions

Accessories such as glass slides & covers slips are also available.

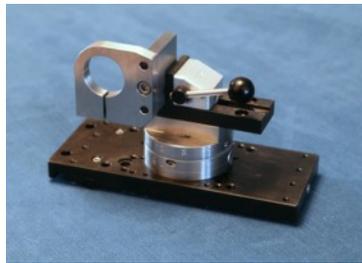
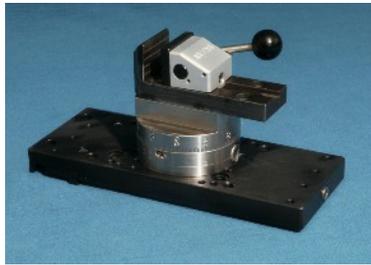
More information can be found at our website www.metprep.co.uk



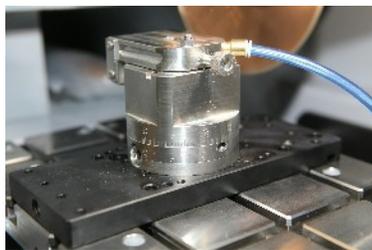
Petrology, Mineralogy, Geology

Sectioning

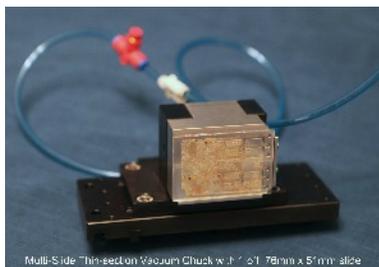
Brilliant 220 cutter with the ability to serial section and precision grind your original rock sample or even your slide mounted section or cut thin section



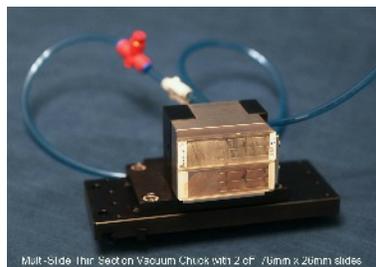
Multiple vices available for a wide arrangement of samples



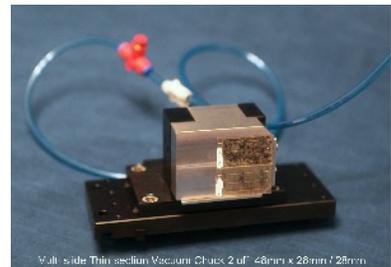
Vacuum system for Precision sectioning / grinding of mounted slides



Multi-Side Thin-section Vacuum Chuck with 1 of 76mm x 51mm slide



Multi-Side Thin-Section Vacuum Chuck with 2 of 76mm x 26mm slides



Multi-Side Thin-section Vacuum Chuck 2 of 48mm x 28mm / 28mm

Multiple size slides sizes clamped on a single vacuum chuck



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Sectioning

The Brilliant cutter range is indeed comprehensive. It includes a manual 250mm chop cutter the Brilliant 200 (left). Incorporating a T-slot bed a wide range of vice configurations are available to hold awkward samples.



Also available amongst the range is the Brilliant 250. A 350 mm cutter with both manual and automatic options.

Options include the ability to serial section. There is also a multiple sample cutting option

For those interested in larger sectioning we offer both a cutter with a 800 mm wheel option and a 5 axis robotic cutter.

For further examples of the wide range of cutters and fixtures available use the following link to our web site

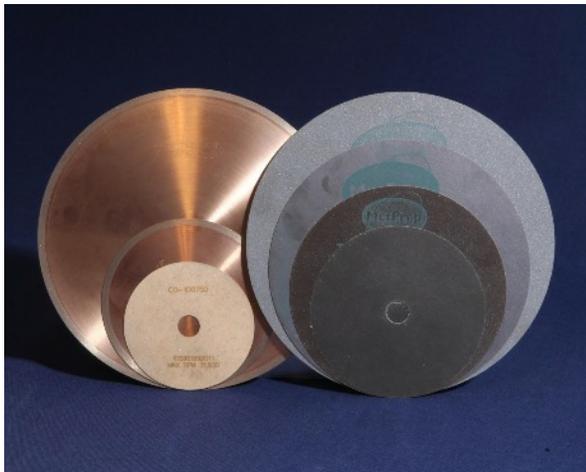
<https://metprep.co.uk/product-category/equipment/cutters/>



Petrology, Mineralogy, Geology

Sectioning

MetPrep offer a wide range of diamond Blades from 75 mm - 350 mm diameter. Both general purpose wheels for the larger abrasive type cutters and thinner wafering blades for precision cutters.



In addition to the comprehensive range of diamond of cut off wheels MetPrep also offer a range of Coolant solutions & dressing sticks

Also available is our range are Diamond Cup Grinding Wheels . These are available for both MetPrep machines and also for those offered by other manufactures. Please feel free to ask for a quotation.

Both Metal bonded & Resin bonded versions are available

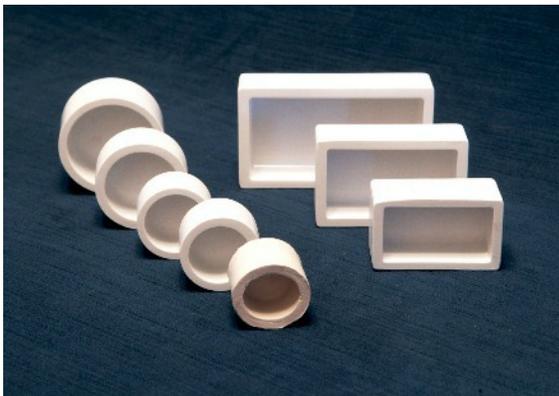




Petrology, Mineralogy, Geology

Mounting

MetPrep offer 2 Epoxide resin systems. The EPO-SET, a standard epoxy resin system with a curing time of 6 hours, and EPO-FLO a low viscosity resin That can be oven cured in 3 hours at 40C.



For encapsulation both Silicone Rubber and Polypropylene cups are available.

Mixing cups, clips and stirring sticks are also available.

Also available are vacuum impregnation systems allowing the resin to be introduced to the sample whilst both are under vacuum and a Pressure vessel to assist in resin penetration





Petrology, Mineralogy, Geology

Grinding

MetPrep offer both Semi Automatic Preparation systems and manual grinder / polishers. Offering platen sizes from 200 - 300 mm in diameter and a range of sample holders for rectangular and round specimens



Machines offer both central pressure for clamped samples and also holders for independent loading for maximum flexibility.

Manual grinder polishers are available in sizes from 200 mm to 300 mm in both single and dual configurations. These can be used Both with or without magnetic bases.





Petrology, Mineralogy, Geology

Grinding & Polishing

MetPrep offer the Saphir 540 for thin section preparation and a wide range of sample holders for the Saphir 550



a



Saphir 540 holders for thin sections



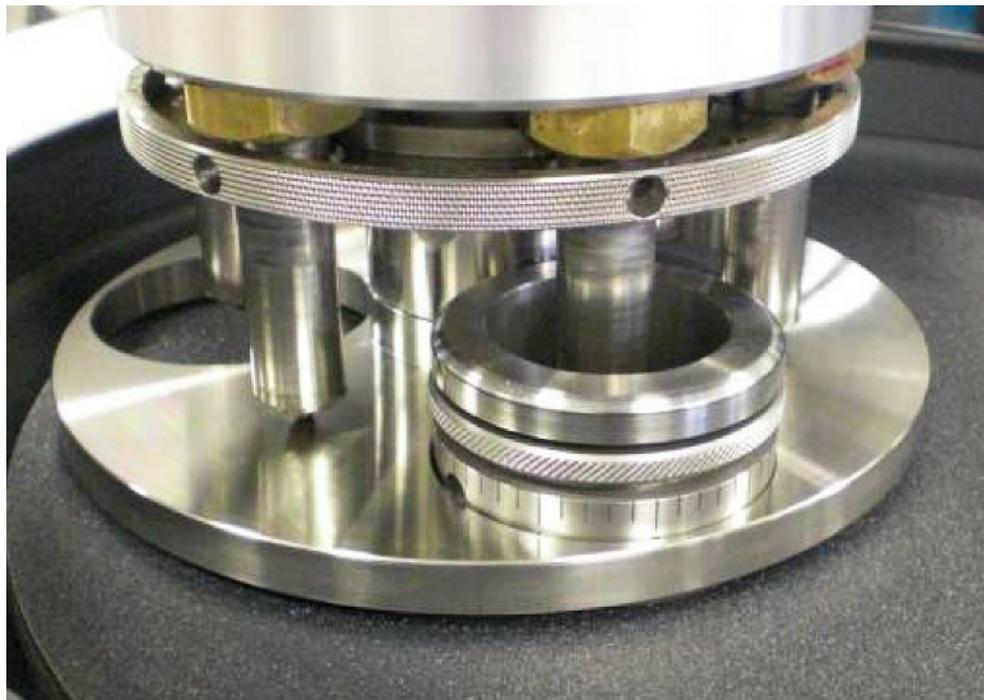
Saphir 550 holders for thin sections



Grinding & Polishing



Sample holder for the manual preparations individual thin sections



Also allows for use with the Saphir 550 preparation system



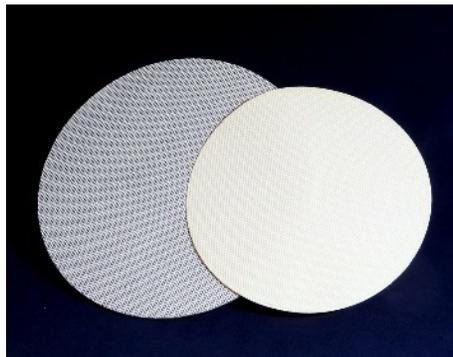
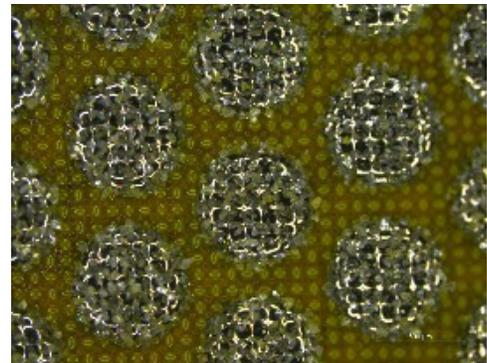
Petrology, Mineralogy, Geology

Grinding Surfaces

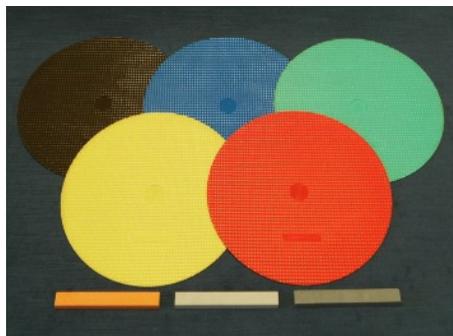
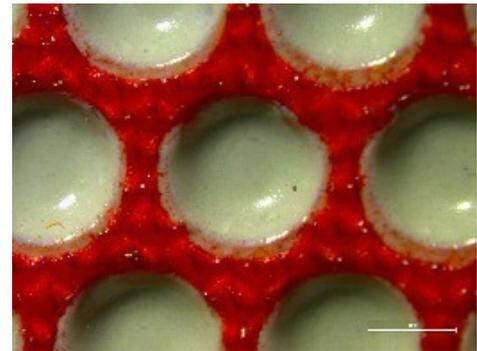
MetPrep offer a wide range of grinding surfaces and abrasives. These include the traditional Metal Bonded & Resin Bonded spotted discs, the new fixed diamond Cameo Platinum discs as well as the traditional Silicon Carbide Papers and powder



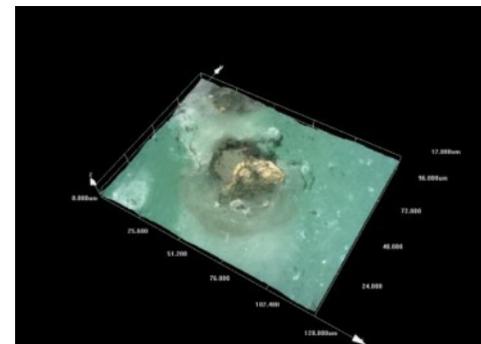
Metal Bonded
Diamond.
Spotted Discs



Resin Bonded
Diamond.
Spotted Discs



Cameo
Platinum
Diamond.
Grinding
Discs





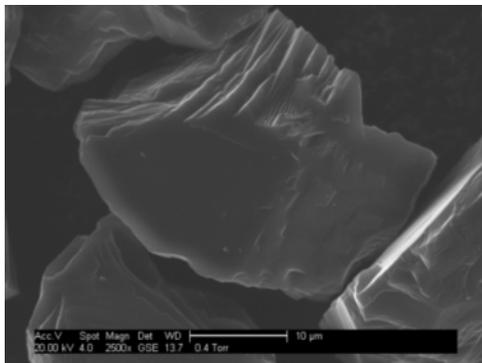
Petrology, Mineralogy, Geology

Abrasives

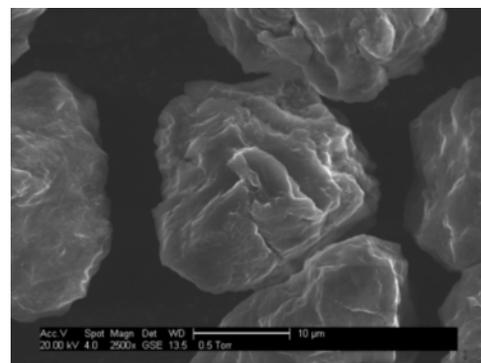
As well as the fixed grinding surfaces MetPrep offer a wide range of abrasives for both grinding and polishing application



Diamond abrasives are available as both suspensions and also as a paste. The suspensions are available in both monocrystalline and polycrystalline forms. Monocrystalline products are available in both oil and water based variants. For diamond paste applications then oil, water and alcohol based lubricants are available.



Monocrystalline diamond



Polycrystalline diamond



Petrology, Mineralogy, Geology

Polishing

Additional to the equipment seen in the grinding section MetPrep also offer a vibratory polisher. The Saphir Vibro



With a hinged lid, programmable settings and magnetic bowl the Saphir Vibratory polisher is a revelation. It is also quiet enough to use in a typical laboratory environment without discomfort to the User.



For oxide grinding & polishing applications Alumina is offered in the ranges 0.05, 0.3. 1 and 5 micron sizes. Colloidal Silica is available in both 0.04 & 0.06 micron

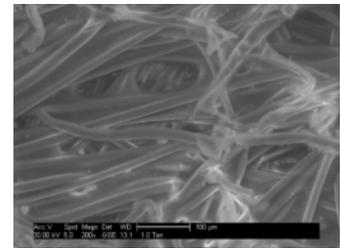


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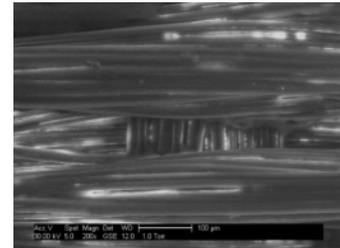
Polishing

MetPrep offer a wide range of cloths for by both grinding and polishing application. Whilst it isn't practical to include all our cloths in this brochure, two cloths popular for both grinding and polishing in Geological applications have been illustrated below.

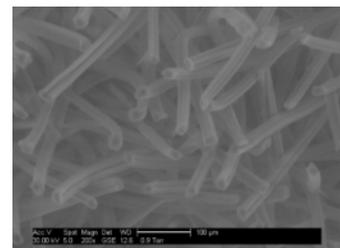
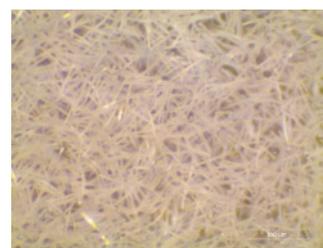
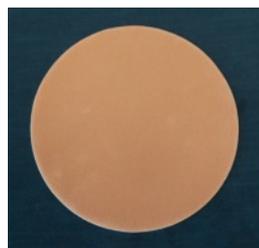
Planocloth



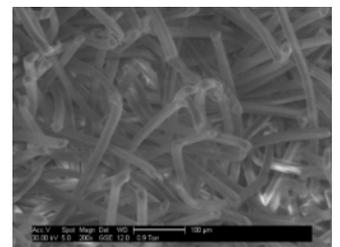
Durasilk



Alphacloth



Multicloth





Petrology, Mineralogy, Geology

Portable Analysis Guns

For those who have the requirement for regular or on site chemical Analysis. MetPrep offer the SciApps LIBS and XRF options complete with a Geochemical XRF package ideal for on site use



X-300 and X-200

| Application | Beam 1 (40 kV) | Beam 2 (10 kV) | Beam 3 (50 kV) |
|-----------------|---|-------------------------|--------------------|
| Geo-Mining | Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Sr, Rb, Zr, Nb, Mo, W, Ta, Au, Hg, Pb, Bi, U | Mg, Al, Si, P, S, K, Ca | Ag, Sn, Sb, Ba |
| Geo-Env Soil | Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Sr, Rb, Zr, Mo, W, Tl, Hg, Pb, Bi | Mg, Al, Si, P, S | Ag, Cd, Sn, Sb, Ba |
| Alloy | Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Se, Y, Zr, Nb, Mo, W, Ta, Hf, Re, Au, Pb, Bi, Ru, Pd, Ag, Cd, Sn, Sb | Mg, Al, Si, P, S | N/A |
| Precious Metals | Ti, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, W, Au, Ge, Ir, Pt, Au, Pb, Bi, Zr, Mo, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb | N/A | N/A |



Petrology, Mineralogy, Geology

Microscopy

MetPrep offer a wide range of microscopes and imaging packages from our Preferred partners Zeiss . From a simple stereo to a fully motorised system all applications are fully supported. Contact us with your needs





Petrology, Mineralogy, Geology

About MetPrep - Contact us

MetPrep offer a wide range additional items, too many to include in this small publication. We also have a comprehensive web site where you will find such items as glass slides etc.

Our web site is www.metprep.co.uk, here you can even generate your own quotations, place orders, download Safety Data Sheets, download Technical Data Sheets on our consumables range, as well as additional equipment information and downloads.

MetPrep ship consumables direct from our head office based in Coventry and ship for next day delivery as standard. If you require a delivery for 10 am please just let us know, it costs more but we can do it for you.

MetPrep have no minimum order level therefore you can order just what you need. Orders placed before 14:00 hrs will normally be Shipped the same day.

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