

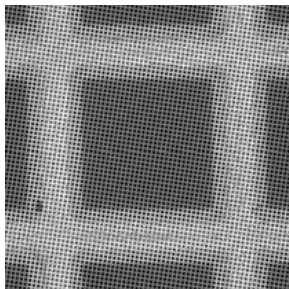


# Cryo-EM Catalogue



 **agar**  
scientific

A CALIBRE SCIENTIFIC COMPANY



## Cryo-EM Catalogue

Agar Scientific offers a wide selection of preparation equipment for transferring, storing and manipulating cryo specimens.

Please contact your Regional Account Manager to discuss your requirements and to request a quotation.



**See p3**  
**easiGlow  
Glow  
Discharge  
Unit**



**See p9**  
**Cryo Grid  
Boxes**



**See p15**  
**Clipping  
Station and  
Tools**



**See p13**  
**Vitrobot  
Tools and  
Accessories**



## easiGlow™ Discharge Cleaning System

Compact, stand alone, easy to use glow discharge cleaning system primarily designed for surface modification of TEM support films. The system supports both hydrophilic and hydrophobic treatments for either a negative or positive charge.

- Precise and easy vacuum setting
- Short cycle times and consistent results
- Auto, programmed and manual mode
- Intuitive touch screen for display and operation
- AGB7361-Cryo bundle includes all items required for a typical glow discharge set up in a Cryo-EM lab
- AGB7361-DUO is for labs which require both hydrophilic and hydrophobic surface treatments on a regular basis

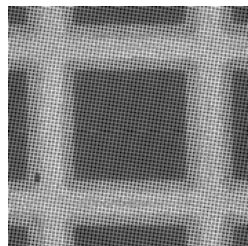
Cat. No.	Product Description	PK
AGB7361	easiGlow™ Glow Discharge Unit	1
AGB7361-DUO	easiGlow™ Dual Chamber Glow Discharge Unit	1
AGB7361-CRYO	easiGlow™ Glow Discharge Unit – Cryo-EM Kit	1 KIT
AGB7363	GD4 Vacuum Pumping System, 3.6 m3/hr. including connection kit, 230 V 50/60 Hz	1
AG9609	Exhaust Filter for GD4 or GD7 Rotary Vacuum Pump	1
AG891-31	Ultra 19 Vacuum Pump Oil, 1 Litre	1
AGY5460	Replacement Glass Chamber with sealed top plate	1
AG16820-81	TEM Grid Holder Block for 81 TEM Grids	1
AG16820-25	TEM Grid Holder Block for 25 TEM Grids	1

Visit [www.agarscientific.com](http://www.agarscientific.com) for full specifications.



## QUANTIFOIL® Holey Carbon Supports for Cryo-EM

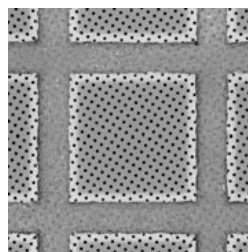
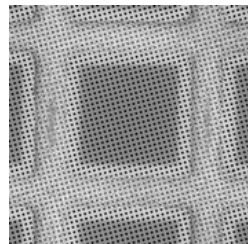
Holey Carbon flat film supports of 10-12 nm thickness. The films provide low-background sample support ideal for high-resolution Cryo-EM data collection. We offer a wide variety of hole shapes, sizes and spacings in combination with a range of base grid materials and mesh sizes.



## QUANTIFOIL® Circular Holes

Used in a wide range of applications from materials science to molecular biology and biomedical imaging.

- Improved sample distribution
- Reduced background scatter
- Thin, even layers of vitrified ice to support particles



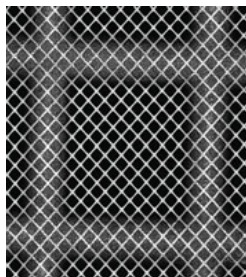
Cat. No.	Product Description	PK
AGS143-1-100	R1.2/1.3, 200 Mesh, Copper, Circular	100
AGS174-1-100	R2/1, 200 Mesh, Copper, Circular	100
AGS173-1-100	R2/2, 200 Mesh, Copper, Circular	100

\*1.2 µm diameter holes; 1.3 µm separation.

Other pack sizes, mesh sizes and materials are available.

## QUANTIFOIL® Square Holes

For imaging applications that require open viewing areas, such as specific materials science applications or tomography. Relatively narrow bars mean that this geometry offers the largest open viewing area of any QUANTIFOIL®.



Cat. No.	Product Description	PK
AGS117-1	R7/2*, 200 Mesh, Copper, Square	10
AGS117-4	R7/2, 200 Mesh, Nickel, Square	10
AGS117-7	R7/2, 200 Mesh, Gold, Square	10

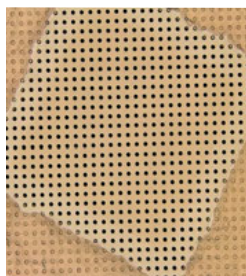
\*7 µm diameter holes; 2 µm separation.

Other pack sizes, mesh sizes and materials are available.

## UltraAuFoil®

UltraAuFoil® Holey Gold supports are highly conductive, and there is no differential contraction between the grid and the foil on plunge freezing, reducing foil crinkling during sample preparation, improving data quality.

- Retains highest resolution data
- Reduces image distortion
- Protects samples from damage
- Biomolecules retain native structure
- Improves particle distribution
- Simplifies grid surveying



Cat. No.	Product Description	PK
AGS188-1	R2/1*, 200 Mesh, Gold	10
AGS188-2	R2/2, 200 Mesh, Gold	10
AGS187-3	R1.2/1.3, 300 Mesh, Gold	10
AGS189-3	R0.6/1, 300 Mesh, Gold	10

\*2 µm diameter holes; 1 µm separation.

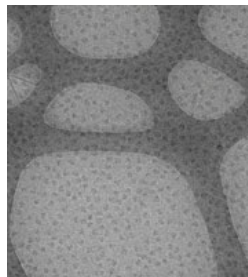


## Graphene Oxide Support Films

Graphene Oxide (GO) provides a thinner support film of higher mechanical strength, electrical and thermal conductivity compared to support films made from other materials.

Manufactured in our laboratories using a unique application method, our GO support films are hydrophilic and ideally suited for imaging small nanoparticles, nanowires and suspensions.

Reduced background contrast and higher resolution for structural determination.



**GO support films can be applied to other grid sizes, material or type. Further details available on request.**

Cat. No.	Product Description	PK
AGS166-4H-GO	GO Support Film on Lacey Carbon on 400 Mesh Copper Grids	25
AGS173-2-GO	GO Support Film on QUANTIFOIL R2/2 on 300 Mesh Copper Grids	10
AGS143-2-GO	GO Support Film on QUANTIFOIL R1.2/1.3 on 300 Mesh Copper Grids	10



### LVL Technologies Laser Marker

The TLM 864 SAFE® tube laser marker can automatically laser-code SAFE® tubes from two sides and link the information in a database to the 2D code that was previously lasered-on during production.

- Code up on 500 tubes per hour from 9 SBS/ANSI positions
- Compatible with SBS 96, SBS 48 and SBS 24 formats
- Label up to 9 racks simultaneously

**Discover more solutions on [www.elkaylabs.com](http://www.elkaylabs.com).**

## Suspended Monolayer Graphene on QUANTIFOIL® Grid

Monolayer graphene grown by CVD and transferred onto a QUANTIFOIL TEM grid, suspended over 2 µm holes.

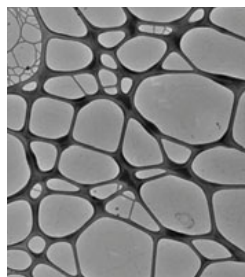
- Growth method: CVD synthesis
- Transfer method: Clean transfer
- Quality control: Optical Microscopy, Raman, SEM and TEM batch checked
- Size: 3 mm (TEM grid diameter)
- Appearance (colour): Transparent



Cat. No.	Product Description	PK
AGS179-GO4	Suspended Monolayer Graphene on TEM Grids QUANTIFOIL R2/4	4

## Graphene Support Film on Lacey Carbon

300 mesh copper lacey grids available with 4 thicknesses (1, 2, 3 - 5 or 6 - 8 layers) of CVD graphene. Supplied as a pack of 6 in AGG706 rotary storage grid box.



Cat. No.	Product Description	PK
AGS217-1	Single Layer Graphene TEM Support Films on Lacey Carbon, 300 Mesh Copper Grids	6
AGS217-2	Double Layer Graphene TEM Support Films on Lacey Carbon, 300 Mesh Copper Grids	6
AGS217-5	3 to 5 Layer Graphene TEM Support Films on Lacey Carbon, 300 Mesh Copper Grids	6
AGS217-8	6 to 8 Layer Graphene TEM Support Films on Lacey Carbon, 300 Mesh Copper Grids	6



## Metal Cryo Grid Boxes

Designed and refined with the microscopist in mind, our metal cryo grid boxes are designed for practical, easy access grid storage in cryogenic conditions.

- Manufactured in durable, cryogenic grade Aluminium
- Numbered wells 1-4, to accommodate autogrid rings and standard TEM grids allowing easy tweezer access
- Pin-type lid with unique step to prevent pick-up tools from sliding down or getting stuck
- Compatible with auto grid rings and Thermo Fisher Scientific loading system
- Reduced electrostatic charging
- Can be cleaned with solvents or autoclave to avoid cross-contamination when re-using grid box
- Robust materials used for a long-life



Cat. No.	Product Description	PK
AGG1001	Metal Cryo Grid Box	1
AGT1002	Cryo-Gripper	1



## Refrigeration – Service Solutions

A comprehensive portfolio designed to maximise the efficiency, reliability, and accuracy of your equipment.

- Health checks
- Servicing and preventative maintenance contracts
- Flexible breakdown cover
- On-site repairs
- Temperature calibration to UKAS standards

**Please contact our dedicated Service Team for more information:**  
[enquiries@medlinescientific.com](mailto:enquiries@medlinescientific.com)



## Plastic Cryo Grid Boxes

Manufactured from a tested, biologically degradable, durable polymer that can be easily cleaned with ethanol. Three colours are available; red, orange and pink, chosen for better contrast under liquid nitrogen and to lead the user's eye to the correct position while the grid box is in use. Compatible with both unclipped and clipped standard 3 mm electron microscopy grids.



Cat. No.	Product Description	PK
AGK140-R-10	Plastic Cryo Grid Boxes, Red	10
AGK140-O-10	Plastic Cryo Grid Boxes, Orange	10
AGK140-P-10	Plastic Cryo Grid Boxes, Pink	10
AGK141-10	Plastic Cryo Grid Boxes, Mixed	10
AGK142	Turning Tool	1

Also available as singles.



### Refrigeration – Breakdown Services

We are on hand if your lab equipment fails or falters with flexible contractual solutions and our call-out repair services. Bespoke options available for all major brands of laboratory fridges and freezers (+4°C to -150°C).

- Servicing and breakdown contracts
- Extended warranty options
- Repairs and call-outs for all major brands

**Contact our dedicated Service Team for more information:**  
[enquiries@medlinescientific.com](mailto:enquiries@medlinescientific.com)



## Hybrid Cryo Grid Boxes

The first Cryo-EM sample storage boxes that have dedicated wells for both unclipped grids and autogrids. Securely holds autogrids and unclipped grids while simultaneously allowing for easy placement and removal from the grid wells. Laser-marked with unique serial numbers, providing easier sample traceability. Each grid box contains:

- Four individual wells for unclipped grids
- Two wells for autogrids, each housing two autogrids



Cat. No.	Product Description	PK
AGK117-W	Hybrid Grid Box (with Pin Lid), White	1
AGK117-B	Hybrid Grid Box (with Pin Lid), Blue	1
AGK117-G	Hybrid Grid Box (with Pin Lid), Green	1
AGK117-P	Hybrid Grid Box (with Pin Lid), Purple	1
AGK117-Y	Hybrid Grid Box (with Pin Lid), Yellow	1
AGK117-PI	Hybrid Grid Box (with Pin Lid), Pink	1
AGK117-12	Hybrid Grid Box (with Pin Lid), Mixed	12

Also available without pin lid.

## Bulk Storage Cryo Grid Boxes

Designed to store an entire 12-grid cassette of samples from vitrification through to cassette loading, the grid box improves storage density and sample traceability, whilst reducing storage complexity and grid box inventory requirements. Available in 6 colours and laser-marked with unique serial numbers, providing easier sample traceability.

- Pocket with 12 slots for holding 12 autogrids
- Also accommodates unclipped grids securely
- Manufactured with a highly opaque plastic, enabling optimal visualisation of grids in the pocket under LN<sub>2</sub>



Cat. No.	Product Description	PK
AGK118-W	Bulk Grid Box (with Pin Lid), White	1
AGK118-B	Bulk Grid Box (with Pin Lid), Blue	1
AGK118-G	Bulk Grid Box (with Pin Lid), Green	1
AGK118-P	Bulk Grid Box (with Pin Lid), Purple	1
AGK118-Y	Bulk Grid Box (with Pin Lid), Yellow	1
AGK118-PI	Bulk Grid Box (with Pin Lid), Pink	1
AGK118-12	Bulk Grid Box (with Pin Lid), Mixed	12

Also available without pin lid.



## Cryo-EM Pucks

Featuring 12 numbered wells, a transparent lid and easy-access tweezer notches for easy retrieving. Each puck has a unique serial number to keep track of every sample.

Locking pucks feature a locking screw which prevents lid rotation when storing.

Available as a complete set of pucks and tools, including:

- 10 x Cryo-EM Pucks
- 1 x Storage Cane
- 1 x Shipping Cane
- 1 x Puck Grasping Tongs



**Pucks and tools can also be purchased individually.**



Cat. No.	Product Description	PK
AGB5002-G2	Cryo-EM Pucks (standard, 12 hole)	1
AGB5003-G2	Cryo-EM Pucks (standard, 12 hole)	10
AGB5001	Cryo-EM Puck Starter Kit	1 KIT
AGB5004	Shelved Storage Cane holds up to 10 Cryo-EM Pucks (HC34 Compatible)	1
AGB5005	Shelved Puck Shipping Cane (ALS Style)	1
AGB5006	Angled Cryo-Tongs	1

## Vitrobot Tweezers Assembly

Complete replacement tweezers assembly for the Thermo Fisher Scientific Vitrobot. Manufactured to a very high precision, the assembly includes ultra-fine points Dumont #5 tweezers with clamping block mounted on dovetail.



Cat. No.	Product Description	PK
AG47000-500	Vitrobot Tweezers Assembly	1

## Cryo Tweezers for Thermo Fisher Scientific Vitrobot System

Innovative tweezer assembly designed for plunge-freezing Cryo-TEM sample preparation, the tweezers are compatible with all generations of the Vitrobot system and have many features to make the sample preparation process more straightforward and repeatable.

- Easy to attach and remove
- Spring-loaded
- Top-quality, ultra-fine point Dumont tweezers



Cat. No.	Product Description	PK
AGT6001	Cryo Tweezers for Thermo Fisher Scientific Vitrobot System	1



## Foam Dewar for Thermo Fisher Scientific Vitrobot System

Well-priced, robust dewars compatible with the Thermo Fisher Scientific Vitrobot. The design of the dewar creates a better seal, allowing for safer grid transfer to grid box.



Cat. No.	Product Description	PK
AGK110	Vitrification Dewar including Metal Parts	1
AGK111	Vitrification Dewar with Foam Ring (no Metal Parts)	1
AGK121	Spare Foam Ring	1
AGK112	Spare Metal Parts	1 KIT

## Ethane Condenser

This custom-designed ethane condenser is designed to securely fit a spider, including from the Thermo Fisher Scientific styrofoam dewar set.

- Easy and ergonomic process
- Reduces wasted ethane gas
- Reduces time required to fill



Cat. No.	Product Description	PK
AGK123	Ethane Condenser	1

## Igloo

Designed to control manual transfer when preparing samples with the Thermo Fisher Scientific Vitrobot. The enclosed environment provides protection from contaminating ambient humidity, and allows a user-friendly experience.



Cat. No.	Product Description	PK
AGK122	Igloo	1

## Autogrid Rings and C-Clips

Premium quality Autogrid Rings and C-Clips for clipping Cryo-EM grids. Compatible in most Cryo-EMs and autoloader systems.

- Developed with significant analysis of equivalent Autogrid Rings and C-Clips
- Manufactured using cutting-edge technology
- Produce less variable, high-quality results



Cat. No.	Product Description	PK
AGK135	C-Clips	100
AGK136	Autogrid Rings	100

## Clipping Station

Optimised for the clipping workflow, the clipping station provides easy and efficient clipping of Cryo-EM grids for Thermo Fisher Scientific autoloader-based microscopes.

- Foam dewar is manufactured from a high-quality, durable, closed-cell polyethylene
- Clipping hub allows for easier workflow
- Lid provides optimal balance between usability and separation of clipping space from ambient temperature
- Silicone mat to reduce station movement



Cat. No.	Product Description	PK
AGK130	Clipping Station	1
AGK130-8	Clipping Station with 8 Clipping Tools	1 KIT
AGK130-16	Clipping Station with 16 Clipping Tools	1 KIT



## Clipping Tools and Rack

Compact-design clipping tool designed to fit inside the clipping station, to ensure the tool is not impacted by any frost from environmental moisture even if subjected to LN<sub>2</sub> for extended periods of time.

- Square profile plunger enables simple retrieval
- Grids can be clipped simultaneously with no risk of ice contamination



Cat. No.	Product Description	PK
AGK131	Clipping Tool	1
AGK131-4	Clipping Tools	4
AGK132	Clipping Tool Rack	1

## C-Clip Bottoming Tool

The C-Clip bottoming tool provides an easier and more efficient way to 'bottom' the C-Clip at the tip of the barrel of a clipping tool prior to clipping. The cylinder of the bottoming tool ensures that the barrel of the clipping tool is straight, meaning the user is much less likely to 'mis-bottom' the C-Clip.



Cat. No.	Product Description	PK
AGK133	C-Clip Bottoming Tool	1



## Autogrid Inspection Tool

A low-cost way of performing a final autogrid inspection step prior to loading them into the cassette, to avoid a poorly clipped grid coming undone in the autoloader.



Cat. No.	Product Description	PK
AGK125	Autogrid Inspection Tool	1

## AutoGrid Tweezers

Designed for handling Thermo Fisher Scientific AutoGrids. Manufactured with a step cut out, enabling users to securely hold the AutoGrid while transferring it from the clipping station to the cassette.



Cat. No.	Product Description	PK
AG47000-600	AutoGrid Tweezers	1

## Reverse Action Autogrid Tweezers

Tweezers which maintain the same tip geometry as traditional autogrid tweezers, but with a reverse-action handle.

- Notched tip to safely cradle autogrids
- Ensures autogrids are placed centered in the cassette slot and at the correct depth
- Reverse action handle ensures the tweezers hold autogrid securely in their natural state



Cat. No.	Product Description	PK
AGK134	Reverse Action Autogrid Tweezers	1



## PPE for Cryogenic Conditions

Quality cryogenic protective equipment for applications down to  $-196^{\circ}\text{C}$  ( $-320^{\circ}\text{F}$ )...

### Cryo-Gloves



### Cryo-Aprons



### Cryo-Safety Kits



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# Laboratory Equipment

We supply a wide range of laboratory equipment and instrumentation...

## Vacuum Coaters



## Diamond Wire Saws



## Grinders and Polishers



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