

TAAB Embedding Resin

Following the demand for more reliable sectioning of tough tissues including skin, bone and keratinized tissue TAAB has introduced **Hard-Plus** into the range of premix kits. Sections show less distortion and retain integrity during subsequent staining procedures for light and electron microscopy.



T027 Hard



Comprising: 5 x 50g Resin
5 x 50g Hardener-hard
5 x 2.5ml Accelerator

T027/1 Hard-Plus

Comprising: 5 x 50g Resin
5 x 50g Hardener-hard-plus
5 x 2.5ml Accelerator

T028 Medium

Comprising: 5 x 50g Resin
5 x 50g Hardener-medium
5 x 2.5ml Accelerator

T029 Soft

Comprising: 5 x 50g Resin
5 x 50g Hardener-soft
5 x 2.5ml Accelerator

Transmit LM Resin



T045 LM



Comprising: 5 x 35g Resin
5 x 69g Hardener
5 x 2ml Accelerator

All Premix Resin Types

For those wishing to make larger batches of resin mixture, each component is available in 500g weights with the accelerators in a 50g size. The ratio of mixing can be taken from the premix kits.

Ampouled Premix Kit accelerators are available separately to replace those in kits which have exceeded their shelf life.

Please see embedding chemicals for items above.

Embedding Chemicals

Araldite 502 Resin



This epoxy resin is the USA equivalent of Araldite CY212. It has a viscosity twice that of CY212 and infiltration times should be extended. Araldite 502 is often blended with TAAB 812, Epon 812 or its equivalents. Weight per epoxide 233-250



E021/1 2.5Kg
E021 500g

Araldite kits – see Kit sections Page C4 to C10

Araldite CY212 (M) Resin



Also generally referred to as Epoxy Resin, it is based on the diglycidyl ether of bisphenol A and is mixed with the reactive anhydride hardener DDSA in equal parts. The slow curing is speeded by the use of an amine accelerator DMP30 or BDMA. The hardness of the block is controlled by the addition of the plasticiser Dibutyl Phthalate.



E015/1 2.5Kg
E015 1Kg
E006 500g
E007 250g
E008 100g

Araldite CY212 Premix Hardeners



E031 500g

Araldite CY212 Premix Resin



Hard
E032 500g

Medium
E033 500g

Soft
E034 500g

Araldite CY212 Premix Accelerator

E035 50g
B023 5 x 2.5ml

Azo-bis-iso Butyronitrile

Thermal and photocalyst for polymerisation of methacrylates

Leduc & Holt, J. Cell Biol., 26, 137 (1965)

McLean & Singer, J. Cell Biol., 20, 518 (1964)



A014 100g
A015 25g

Benzil

(Dibenzoyl), Blue light catalyst for LR Gold.

B030 50g

Benzoin

Photocalyst for polymerisation of methacrylates.

M.W. 212.25 M.P. 134-136°C

Charles & Sikorsky, Brit. J. Appl. Phys., 7, 152 (1956)

B001 25g

Benzoyl Peroxide, damped

This material is supplied damped with 25% water, and before adding to methacrylates as a polymerisation catalyst should be "damp dried" on blotting paper.

M.W. 242.22



B002 100g
B003 25g

Dibenzoyl Peroxide, 50% powder

An alternative to benzoyl peroxide damped, reputed to be less hazardous and easier to use.

B031 50g

Benzyl dimethylamine (BDMA)

(N-Benzyl-N,N-Dimethylamine). M.W. 135.21 B.P. 177 – 180°C

An amine accelerator for polymerisation of epoxy resins.

A direct and preferred alternative to DMP-30.

B006 500ml
B007 250ml
B008 100ml
B036 50ml
B037 25ml
B022 5 x 2ml

2-Butoxyethanol

(Ethylene Glycol Monobutyl Ether) M.W. 118.18
Component of HEMA resin for 1-2µm sections for light microscopy using the Ruddell technique.

B020 1ltr
B020/1 5ltr
B019 500ml
B033 100ml

t-Butyl Perbenzoate

Used as a catalyst in the Vestopal W resin media.
M.W. 194.23



B034 100g
B035 25g

n-Butyl Methacrylate

Stabilised with 60ppm hydroquinone M.W. 142.20

B014 500ml
B032 100ml

Carbohydrazide

CO(NHNH₂)₂ M.W. 90.08
for GACH embedding kit

A water-miscible, lipid retaining, embedding polymer for EM

Heckman, et.al., Ultrastruct Res., 42, 156 (1973)

C044 25g

Carbowax 400

(Polyethylene Glycol), component of HEMA resin.

C029 100ml

Clear Casting Resin C



An unsaturated polyester resin in styrene monomer. Ideal for clear casting of biological & medical specimens and when mixed with styrene is an excellent embedding resin for undecalcified bones, sections are easily cut to 5µm

C032 1Kg
C033 5Kg
C034 50g

Clear Casting Resin C – Catalyst



Used 1% concentration i.e. 10ml to 1Kg of resin

C034 10ml

Cobalt Naphthenate 6%



Used as an activator for the Vestopal embedding resin.

C030 250ml
C031 25ml



Cryo-M-Bed

Embedding compound for frozen tissue specimens, leaves no residue to discolour slide or section

C028 100ml

DER 736



(Diglycidyl Ether of Polypropylene Glycol). Weight per epoxide 175 – 205. Used as a component of Spurr's resin. Can also be used to simplify infiltration in combination with TAAB 812 (Epon 812)

Kushida, J. Electron micro., 16, 278 (1964)

D003 500g
D004 250g
D005 100g

Dibutyl Phthalate



A plasticiser for epoxy resins. M.W. 278.35

D010 500g
D011 100g

2-Dimethylaminoethyl Methacrylate



Stabilised with 800ppm hydroquinone, a water soluble monomer M.W.175.21

D034 500g



n-n-Dimethylaniline



Component of HEMA resin M.W. 121.18

D029 100g

Divinylbenzine



55% solution in Ethylvinylbenzine. A cross-linking agent for methacrylates to produce solvent-resistant and thermostable polymers. M.W.130.19

D021 100g

D.D.S.A. EM – Distilled



C₁₆H₂₆O₃ M.W. 266.38 Specific gravity 1.005 (Dodecyl Succinic Anhydride), an **ultra pure** grade DDSA produced by distillation to control colour variations of embedding resins and offers complete infiltration of tissue. Specially prepared for EM as an epoxide hardener.

D031 1Kg
D025 500g
D026 250g
D027 100g

D.D.S.A. Practical



When the need for the ultra pure distilled grade is not necessary TAAB have reintroduced a practical grade for general use, this will however give darker blocks.

D012	1Kg
D013	500g
D014	250g
D015	100g

DMP-30



(2,4,6- Tri(Dimethylaminomethyl) Phenol) used as an accelerator for epoxides. Although more viscous than other accelerators DMP-30 is one of the most popular accelerators in use. Absorbs moisture and carbon dioxide – keep dry and container tightly closed. M.W. 265.00



D022	500g
D023	250g
D024	100g
D032	50g
D035	25g

Dow Corning Silicone Fluid 200



Used with epoxy resin to reduce diffusion of water soluble radioactive substance from frozen dried tissue Stirling & Kinter, J. Cell Biol., 35, 585 (1967)

D028	100g
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Durcupan Kits – see Kit section page 22.4

Durcupan Components



– *Water soluble*

Durcupan component A (Monomer)	
D033/A	100ml
Durcupan component B (Hardener)	
D033/B	100ml

Durcupan Components



ACM Epoxy



Durcupan component A/M (Epoxy resin)

D036/A	100ml
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Durcupan component B (Hardener)

D036/B	100ml
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Emix resin kits – see Kit section page 22.10

Emix Premix Resin



A low viscosity epoxy resin (0.7 to 1.1 Pa.s at 25°C) ideally suited to routine embedding for EM

E039	500g
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Emix Premix Hardeners



Hard
E040 500g

Medium
E041 500g

Soft
E042 500g

Emix Premix Accelerator



B023	5 x 2.5ml
E044	5 x 4ml

E.R.L 4221D



E208/100	100ml
E208/1L	1 litre
E208/250	250ml
E208/500	500ml



Hexahydrophthalic Anhydride



(An epoxide hardener)

H003 500g

HEMA Kit – see Kit section page 22.5

2-Hydroxyethyl Methacrylate EM



GMA (Glycol Methacrylate) is a water soluble embedding medium for which an improved technique has been described. Stabilised with 200ppm hydroquinone. M.W. 130.14

Leduc & Holt, J. Cell Biol., 26, 137 (1965)

Ruddell, Stain Technology, 42, 253 (1967)

Green J. Clinical Pathology, 23, 640 (1970)

Sims, J. Microscopy, 101, 223 (1974)

Spaur, R.C. & Moriatry, G. J. Histochem. Cytochem., 23, 163 (1977)

H008 500ml

H009 250ml

H010 100ml

2-Hydroxyethyl Methacrylate – Low Acid



For critical applications TAAB offers a low acid HEMA (less than 1% methacrylic acid)

H020 500ml

H021 100ml

2-Hydroxypropyl Methacrylate EM



HPMA – A water soluble embedding medium, stabilised with hydroquinone. Infiltration follows the fixation of tissue and there is no extraction of material caused by any dehydration protocol. M.W. 144.17

H011 500ml

H012 250ml

H013 100ml

Lemix A – Monomer



Fully miscible with water and can therefore be used to achieve water replacement without causing excessive shrinkage. Lipid loss is much less than with ethanol dehydration, typically 40% compared with 95%. When cured the resin remains hydrophilic, improving the use of water based stains. Does not require the use of an intermediate solvent such as propylene oxide.

L024 125g

Lemix B – Hardener



Epoxide hardener

L025 500g

Lemix C – Accelerator



L026 100ml



Lemix D – Hardener



L027 100g

LR White & Gold Resins - see Kit section page 22.5

Methacrylic Acid



(2-Methacrylic Acid) M.W. 86.09

M021 500g

Methacrylate Kit – see Kit section page 22.6

Methyl Methacrylate



Stabilised with 60ppm hydroquinone. M.W. 100.12

M008 500ml

M022 100ml



M.N.A



(Methyl Nadic Anhydride). A hardener for epoxides. M.W. 178.19

M013 1Kg

M010 500g

M011 250g

M012 100g



N.S.A EM - Distilled

(Nonenyl succinic Anhydride). A distilled grade specially prepared for use as a hardener for epoxides giving clearer blocks than the standard NSA. M.W. 227.0

N010	1Kg
N007	500g
N008	250g
N009	100g

N.S.A Practical

A practical grade for general use when it is not necessary to use the ultra pure distilled grade. This material will give darker blocks.

N017	1Kg
N018	500g
N019	250g
N020	100g

O.S.A

(n-Octenyl Succinic Anhydride) The replacement for Hexenyl Succinic Anhydride which is no longer available. A component of the Ultra-low viscosity resin.

Polyvinyl Pyrrolidone

Osmotic adjuster used in LR Gold resin

P016	100g
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Propylene Oxide

(Epoxypropane) M.W. 58.08 Solvent for epoxy resins. Used in final dehydration of tissue following alcohol as a transitional agent prior to resin infiltration. F.P. -37°C



P021	500ml
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Quetol 523/HEMA

Water soluble methacrylate used with 2-hydroxyethyl Methacrylate to give a low viscosity medium for ease of infiltration, sectioning and staining. This blended system results in much higher beam stability. Supplied as a 80:20 blend of HEMA:Quetol 523. Kushida, Hiroshi., J.Elec. Micro 2655, N4 351-353 (1977)

Q003	500g
Q004	100g

Quetol 651

A low viscosity resin miscible with water, alcohol, acetone and 2,3-epoxypropyl butyl ether. The polymerised blocks section easier than ordinary epoxy resin mixtures. M.W.174.20

Q001	500g
Q002	100g

Quetol 651 Kit – see Kit section page 22.6**RD2**

(1,4-Butanediol Diglycidyl Ether). Component of Ultra Low Viscosity resin. M.W. 202.2

R007	500ml
R008	250ml
R009	100ml

S-1

(2-Dimethylaminoethanol), curing agent for epoxides. M.W. 89.14

S001	500ml
S458	250ml
S002	100ml
S453	25ml
S049	50ml
S039	5 x 2ml
S454	5 x 1ml

Spurr Kit – See now TAAB Low Viscosity Resin (TLV)**TAAB Low Viscosity Resin (TLV)**

T264 TLV resin	500g
T265 TLV resin	250g
T266 TLV resin	100g

TLV Premix Hardener VH1

T267	500g
T268	250g
T269	100g

TLV Premix Hardener VH2



T270	500g
T271	250g
T272	100g

TLV Premix Accelerator



T273	100ml
T274	50ml
T275	5 x 2.5ml



Styrene



A component of some methacrylate resin media for ultramicrotomy. M.W. 104.15
Kushida, H., J. Electron Micro., 10, 15 (1961)



S451	500g
S452	50g

TAAB Embedding Resin



A resin which has been developed by TAAB for embedding biological specimens for EM and LM. A relatively low viscosity resin exhibiting very good cutting and staining qualities, with freedom from background 'grain'. Stability under the electron beam is good and the resin readily accepts heavy metal stains. A wide range of hardnesses can be obtained by varying the proportions of the hardeners DDSA and MNA.



T025	1Kg
T001	500g



T002	250g
T003	100g

TER kits – see Kit sections page 22.4 to 22.11

T.E.R Premix Resin



T033	500g
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T.E.R. Premix Hardeners



Hard	
T034	500g

Medium	
T035	500g

Soft	
T036	500g

T.E.R. Premix Accelerator



T037	50ml
B023	5 x 2.5ml

TAAB Transmit Resin

A resin developed by TAAB which is a low viscosity aliphatic epoxy resin plus reactive anhydride which allows the production of both high quality semi-thin and ultra-thin sections. Transmit possesses very similar characteristics to Spurr's resin without the attendant carcinogenic risk.

Transmit Resin LM



T200	500g
T201	250g
T202	100g

Transmit Resin EM



T203	500g
T204	250g
T205	100g

Transmit Resin EM



T203	500g
T204	250g
T205	100g

Transmit Hardener TH1



T206	500g
T207	250g
T208	100g

Transmit Hardener TH2



T209	500g
T210	250g
T211	100g



Transmit Accelerator



T212	10 x 2ml
T213	100ml
Premix	
T259	5 x 2ml
T213K	25ml



TAAB 812 Resin



A high quality resin produced in small batches to act as an exact equivalent to Epon 812 which is no longer commercially available. The triglycidyl ether of glycerol, it is a reliable, popular epoxy resin suitable for EM and can give very good results in LM but the viscosity can restrict specimen size in LM. Sensitive to atmospheric moisture. Weight per epoxide 148- 150



T021	1Kg
T022	500g
T023	250g
T026	100g

TAAB 812 kits – see pages 22.4 to 22.11

TAAB 812 Premix Resin



T038 500g



TAAB 812 Premix Hardeners

Hard

T039 500g



Medium

T040 500g

Soft

T041 500g

TAAB 812 Premix Accelerator



T042 50g
B023 2.5ml

Ketjen Black electro conductive additive
for epoxy resins for Gatan 3View

An electro conductive carbon black to make EM epoxies conductive particularly for Gatan 3View serial blockface sectioning in the SEM. Reduces specimen charging and is effective in very small quantities. Free flowing, easily dispersed and odourless.



C409 Ketjen Black electro conductive additive 25g

Technovit Components

Technovit 3040



T225	Powder	1kg
T226	Powder	2Kg
T227	Liquid	500ml
T228	Liquid	1ltr

Technovit 4000



T232	Powder	1kg
T253	Liquid	500ml

Technovit 4004



T234	Powder	1kg
T235	Powder	2Kg
T236	Liquid	500ml
T237	Liquid	1ltr

Technovit 4071



T239	Powder	1kg
T240	Powder	2Kg
T241	Liquid	500ml
T242	Liquid	1ltr

Technovit 5071



T247	Powder	1kg
T248	Powder	2Kg
T249	Liquid	500ml
T250	Liquid	1ltr

Vestopal 310 (W) Resin



A styrene-polyester based embedding medium which polymerises at room temperature to a light yellow resin. It has a fine grain and sections stain easily. It penetrates tissue rapidly, and does not show uneven polymerisation, the resin is stable under the electron beam.



V008 500g

Vestopal kits – see Kit section page 22.9

WAXES FOR HISTOLOGY

Fibrowax

A mixture of pure paraffin wax and plastic polymers, and a valuable aid to section cutting both for difficult tissues and routine histology. Melts at 57-58°C and aids sectioning of hard or fibrous tissue. Ribbons easily at 4µm. Tissue compression is reduced to a minimum with no cracking or crumbling of ribbons.

W001 1Kg
W002 10Kg

Low Melting Point Wax

Applications – for use where enzyme histochemistry is required in paraffin sections. Melting point 45°C. Supplied in 500g tablet form

W003 500g

Paraplast Plus

Cuts to 2µm with excellent ribbon continuity and melts rapidly at 56-57°C. Double filtered paraffin containing plastic polymers of regulated molecular weights and small per cent of dimethyl sulphoxide (DMSO) for faster tissue penetration. Supplied in pellet form.

W006 1Kg

Paraplast X-tra

Cuts to 2µm with exceptional ribbon continuity and melts rapidly at 50-54°C. Lower temperature infiltration eliminates tissue “cooking” which can cause distortion. Extra compression resistance provides total support of tissue and morphology is preserved. A unique blend of low molecular weight polymers and highly purified paraffins for exceptional compression resistance and ribbon continuity. Supplied in pellet form.

W007 1Kg

Polyester Wax

A ribboning embedding medium with a melting point of 37°C, reducing tissue hardening and shrinkage. Soluble in most organic solvents, including alcohols, ethers, esters, ketones and hydrocarbons, it also has good water tolerance. Almost opaque in appearance and sections easily, 2µm and above may be cut at room temperature.

W005 500g

Paraffin Wax

Pure paraffin wax, pelletized. Melting point 56°C

W008 5Kg
W009 10Kg