

Suggested Instructions for the tousimis tEPON 812 Embedding Kit #3132

Each kit contains:

2 x 100ml tousimis tEPON-812 Resin (WPE 151, unless otherwise stated)	Cat.# 3131
100ml tousimis DDSA	Cat.# 3123
100g tousimis NMA	Cat.# 3143
25 ml tousimis DMP-30.....	Cat.# 3103

Definitions:

A-	Anhydrite (DDSA or NMA)
E-	tEPON-812 (tousimis epoxy resin)
WPE-	Weight Percent Equivalent
DDSA-	Dodecenyl Succinic Anhydrite
NMA-	Nadic Methyl Anhydrite
DMP-30-	Tri-(DiMethylaminomethyl) Phenol

Caution:

1. MSDS for each chemical must be read before you use any of them in this kit.
2. Use clean and dry utensils throughout the entire procedure in a dry (50% relative humidity or less). Moisture (H₂O) from the air when absorbed by the anhydrides will affect the polymerization stoichiometry. Work in adequately ventilated laboratory environment.
3. Should you need more information on recommended fixation, fixatives, and dehydration procedures, please call **tousimis**.

Mixture A

tEPON/Anhydrite Ratio (tEPON with a WPE 151)

<u>Ratio</u>	<u>tEPON(ml)</u>	<u>DDSA(ml)</u>
#1	70.8	plus 100
#2	75.6	plus 100
#3	82.1	plus 100

Mixture B

tEPON/Anhydrite Ratio (tEPON with a WPE 151)

<u>Ratio</u>	<u>tEPON(ml)</u>	<u>NMA(ml)</u>
#1	92	plus 100
#2	85	plus 100
#3	79	plus 100

Hardness of Polymerized tEPON

Choose curing times-temperatures from table below first; then use this table.

	<u>block hardness</u>		
	<u>Hard</u>	<u>Medium</u>	<u>Soft</u>
<u>Mixture A (DDSA/tEPON)</u> % by volume	0	30 50 70	100
<u>Mixture B (NMA/tEPON)</u> % by volume	100	70 50 30	0

Add 1.5% (to either mixture) by volume of DMP-30.

Mix well before use.

Curing Temperatures and Times

For tEPON/Anhydrite Ratios (See Mixtures A&B tables and DMP-30 added)

<u>Ratios</u>	<u>Oven temperature</u>	<u>Time</u>
#1	95° C	3-12 hours
#2	35° C/45° C/60° C	12 hours
#3	60° C/95° C	12 hours

EXAMPLE:

For a medium hardness:

Step one: Look up curing times table Temperatures and Times

For polymerization times 35°C/45°C/60°C 12 hours.

Use tEPON/Anhydrite Ratios #2 (from Mixture A&B tables).

Step two: For a medium hardness (depends on tissue, microtome, knife, personal preference) look up hardness table.

Use tEPON/Anhydrite ratios #2 for mixtures A and B from the tables above.

Final embedding mixture:

Mix 50/50 by volume mixtures A and B and add 1.5% by volume DMP-30, then mix again.

NOTE: We are furnishing this information as a guide only. The age, exposure conditions and environment of any of the components could affect the polymerization hardness and times. Always use fresh components and strictly observe the MSDS guidelines in handling them. Should you have any questions, do not hesitate to call or write **tousimis**.

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