

## CERTIFICATE OF ANALYSIS

### MediLumine Inc.

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Product:	Vascupaint™ silicone injection compound for ex vivo microscopy and micro-CT imaging. The kit consists of a first part pigment green 7 nanoparticle dispersion in silicone (200 ml), a second part PDMS diluent (200 ml) and third part catalyst (25 ml).
Trade Name(s):	Vascupaint™
Kit SKU#:	MDL-122
Lot Number for Kit:	CA100325G
Component SKU#:	MDL-122G (silicone), MDL-121D (diluent), MDL-121C (catalyst)
Lot Numbers for kit items:	VG100325G (silicone), DI102124 (diluent) and CA070525 (catalyst)
Storage:	Store at room temperature
Expiry date:	Two years from manufacture date

### ***Component 1: Pigment green 7 Nanoparticle Dispersion in Silicone***

Appearance:	Green
Pigment green 7 conc.:	20% by weight
Viscosity @ 25°C:	NA

### ***Component 2: PDMS Diluent***

Appearance:	Clear
Viscosity @ 25 C, cST:	4.8
Refractive Index:	1.3955

### ***Component 3: Catalyst***

Appearance:	Clear
Specific Gravity:	0.96
Refractive Index:	1.3900

### ***Preparing Stock Solutions of Silicone and Diluent Mixtures***

Add one part (by weight) green silicone to one part diluent which is approximately 20 ml of Vascupaint (into 50 ml conical tube) and 25 ml diluent to the same tube. Gently invert the tube several times until the mixture is homogeneous and store for future use.

### ***Using Previously Prepared Stock Solutions of Silicone and Diluent Mixtures***

Some 'soft settling' of pigments will occur in the stock solution. You can remove this by gently inverting the bottle several times. The pigments will remain suspended in solutions for several hours after this gentle inversion step.

### ***Mix ratio for perfusion into non-surviving organism***

Mix ratios can be slightly adjusted to fit the application of the user. One example of a protocol that is used often is to add 9 ml of the stock solution to a 14 ml conical tube or to a petri dish for mixing with 5% (0.45 ml) catalyst.

See the Vascupaint protocol and data sheet for more information.

### ***Contrast Enhancement, Viscosity and Gelation Kinetics***

Altering rations of the green silicone to diluent will help to modify the level of contrast enhancement of Vascupaint. For example, adding 4 ml of green silicone to 4 ml of diluent instead of 5 ml of diluent.

Viscosity starts to increase 25 minutes after mixing and hardening occurs 90 minutes after. Add more catalyst, up to 5% of Silicone/Diluent mixture, to achieve desired stiffness level of rubber silicone for tissue clearing applications.