



# MS3

A much-awaited varnish for art conservators invented in Australia

In collaboration with [National Gallery of Victoria \(NGV\)](#) and [Boron Molecular \(Boron\)](#), we developed MS3, a conservation grade varnish for the preservation of irreplaceable heritage assets.

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## Conserving paintings for the future

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### The challenge

MS2A was the revered varnish of choice for the art conservators globally for more than 50 years. In 2014, the company producing the varnish ceased trading. Conservators across the world kept experimenting with interleaving layers of available resins, but failed to achieve consistent results. This compounded the health, safety and environmental concerns associated with the use of carcinogenic chemicals during the varnish application process and the risk of irreversible damage to valuable artwork across the globe.

### The response

We worked in close collaboration with NGV and local specialist chemical manufacturer Boron to develop and produce MS3. The team leveraged interdisciplinary expertise in chemical synthesis and continuous flow chemistry to deliver an improved quality version of the original MS2A varnish. Superior processing gave the resin its improved colour, chemical stability, and consistency between batches, resulting in minimal discolouration or cracking over time. Keeping the customer at the heart of innovation led the team to progress from proof of concept to market within a span of only three years.

### The impact

MS3 provides a stable, consistent, safe-to-use and aesthetically appropriate varnish solution that addresses the practical challenges of responsibly conserving paintings for the future through the application of improved processing technology. Unrestricted access to the new varnish has also led to renewed consumer confidence.

The varnish has received highly positive feedback from the world's most important art museums and galleries in Australia and internationally, and is being applied on famous collections like Rembrandt's *Two Old Men Disputing* and van Dyck's portrait Philip Herbert, the 4th Earl of Pembroke.

The project's benefit cost ratio is assessed at 5–19.5 (dependent upon the adoption profile). The work has delivered a net present value of \$3.6–14.4 million with our attribution of 40 per cent.

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