**Methodology of schematic paint reconstructions**

**Materials:**

- **Oil:** raw linseed oil pressed by oil mill ‘Het Pink’ in Zaanse Schans, exposed to sunlight on a windowsill for ±2 years.
- **Ultramarine:** Lapis Lazuli, pale – 10540 from Kremer Pigmente. From personal correspondence with the manufacturer, it was stated that this is Kremer’s “highest quality ultramarine with the largest particles and the least amount of impurities (although it has not been rolled in wax to purify it).” [https://www.kremer-pigmente.com/de/lapis-lazuli-hell-10540.html](https://www.kremer-pigmente.com/de/lapis-lazuli-hell-10540.html) [Internet: Accessed 17 January 2020.]

  Before being made into a paint, the pigment was washed in demineralised water and ground with a muller.
- **Yellow lake:** Weld (*Reseda luteola*) on a chalk and alum substrate (proportions chalk:alum 4:1 in wt%). This pigment was prepared using a method based on a historical recipe described in two publications: Torresi AP. Tecniche artistiche a Siena: Alcuni trattati e ricettari del Rinascimento nella Biblioteca degli Intronati, Codex L.XI.41. Siena, Biblioteca Comunale degli Intronati / Ferrara; 1993;no. XX; p. 46.


**Preparation:**

Using a muller and a glass plate, the ultramarine pigment was ground with linseed oil (quantities and weight of both were recorded) until it had formed a workable paint with a smooth, buttery consistency. The weld and chalk were each ground with the oil in a similar way. Different known proportions (measured by weight) of ultramarine paint were combined with specific amounts of weld or chalk in different proportions (0, 25, 50 and 75 volume%). Paints were applied to the opacity chart in an even thickness of 50 µm and 100 µm using a draw-down bar (4-sided stainless-steel applicator with gap clearances of 50, 100, 150 and 200 µm). Paints were also applied with a thick and a thin brush to imitate the brushstrokes in the headscarf.

**Figure (next page):**

Paint reconstructions with ultramarine (lapis lazuli, Kremer), chalk and yellow lake (weld on chalk/alum substrate) in different proportions (vol%). The paints were applied with a paint applicator (films 50 and 100 µm thick) and a broad and fine brush onto black and white sealed opacity charts.