

## PHYSICO-CHEMICAL INSIGHTS INTO SANGUINE AND CARNATION BASED ON REPRODUCED HISTORIC RECIPES.

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As a follow-up to the study of Sanguine and Carnation, executed and submitted by Anne-Catherine Perreau, the physico-chemical approach will be discussed in this contribution. As mentioned in her abstract, in order to understand properly the sometimes severely deteriorated and complex layers of surface decoration and hence to fulfil a proper conservation treatment, it is essential to clearly understand the behaviour, the differences and the manufacturing processes of Sanguine, Carnation and coloured grisaille.

The various series of mockups prepared by A.-C. Perreau were based on historic recipes. A detailed observation of grainsizes, distributions, representations and glass surface – paint interface was done by using high performance optical microscope (ZEISS) and a digital microscope (HIROX). All these mockups were analysed by applying SEM-EDX and a few were selected for RAMAN spectroscopy. The obtained results will be outlined in this presentation.

In extension of this study a selected number of 16<sup>th</sup> century stained glass panels from STAM museum of Ghent, Belgium were scanned by MA-XRF (BRUKER) in order to evaluate the presence of Carnation and Sanguine. During this contribution it will be demonstrated how MA-XRF can contribute in reading sometimes heavily deteriorated Stained Glass.