

K1356 - Scientific analysis report, 1988

National Gallery of Art
Science Department July 26, 1988

ANALYSIS REPORT

1952.5.8
Francesco di Giorgio
God the Father
Eress Collection

A sample of old fill removed from di Giorgio's *God the Father* was looked at to determine if it was either lead white or calcium carbonate. This was done in order to identify any possible health hazards for the conservator. The sample was first analyzed using x-ray fluorescence spectroscopy (XRF) using a SPECT 07500 spectrometer. The sample was mounted between two pieces of polypropylene film and placed in front of the x-ray beam. No lines were seen in the spectrum at 10.55keV or 12.62keV, so lead is not present at detectable levels. In contrast large peaks were seen at 3.70keV and 4.01keV, which indicate the presence of calcium in the sample. There were no other peaks observed that would represent elements in the sample.

The XRF spectrum does not show the presence of elements lighter than calcium, so microchemical tests were used to show which calcium salts were present. A small amount of the sample was placed on a well slide and a drop of 6N hydrochloric acid was added. The sample was seen to effervesce and dissolve completely, indicating the presence of calcium carbonate. If calcium sulfate had been present, some of the sample would have remained. Thus the sample is calcium carbonate and does not pose any hazards to the conservator.

3. The XRF was equipped with a FeCl_3 secondary target, 6mm collimators, 40kV anode voltage and 0.40 mA anode current. The data was stored under 82.6.8 on the Paintings 35 diskette.

01/25/88
Date

Ellen S. Halpern
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Conservation Science
Technician

25 July 88
Date

Barbara K. Davis
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IDENTIFIER

DOC15334

ARCHIVAL ITEM TYPE

Conservation Report

CREATOR

National Gallery of Art, Washington, District of Columbia

DATE

1988

CITATION

National Gallery of Art, Painting Conservation Department Records

1 RELATED ART OBJECT



K1356

Francesco di Giorgio Martini

God the Father Surrounded by Angels and Cherubim

National Gallery of Art, Washington, District of Columbia

RECORD LINK

KRESS COLLECTION DIGITAL ARCHIVE

<https://kress.nga.gov/Detail/archival/DOC15334>