Clark Laboratory Test Report

Company:	Daniel Smith, Inc
Address:	4150 1st Avenue South Seattle, WA 98134
Sample	Primatek (mineral watercolors)
Report Number	TS 415572 Rev.0
Testing Dates	May 11, 2021 – May 19, 2021
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Issued By	Clark Laboratory, LLC 1801 Route 51 South Jefferson Hills, PA 15025

Prepared By:	Approved By:
	
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Revision History

REV #	DATE	PREPARED BY (CLARK)	SECTION	DESCRIPTION
0	5/26/21	Michelle Felicetti	All	Initial Release

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1. Summary of Results

Daniel Smith Inc.

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415572-1	Minnesota Pipestone WC	Catlanonite	YES
415572-2	Lapis Lazuli WC	Lazurite	YES
415572-3	Goethite (Brown Ochre) WC	Geothite	YES
415572-4	Sleeping Beauty Turquoise	Turquoise	YES
415572-5	Kingman Green Turquoise	Turquoise	YES
415572-6	Hematite WC	Hematite	YES
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415572-8	Hematite Burnt Scarlet WC	Hematite	YES
415572-9	Tiger's Eye WC	Quartz/Fe2O3	YES
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415572-18	Blue Apatite WC	Hydroxyapatite	YES
415572-19	Green Apatite WC	Apatite	YES
415572-20	Bronzite WC	Enstatite, Ferreon	YES
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415572-22	Burnt Bronzite WC	Enstatite, Ferreon	YES
415572-23	Garnet WC	Pyrope/Spessartine/Almadine	YES
415572-24	Black Tourmaline WC	Schorl / Hydroschorl	YES
415572-25	Sicklerite WC	Sicklerite (ferreon)	YES
415572-26	Diopside WC	Diopside	YES
415572-27	Red Jasper WC	O2Si / Hematite	YES

1. Summary for Minnesota Pipestone WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the mineral Catlanonite was found in Minnesota Pipestone WC

2.1. Sample

Sample #	Sample ID	Mineral	Mineral Found Yes or No
415572-1	Minnesota Pipestone WC	Catlanonite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Lapis Lazuli WC

1.1 Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the mineral Lazurite was found in Lapis Lazuli WC

2.1 Sample

Sample #	Sample ID	Mineral	Yes or No
415572-2	Lapis Lazuli WC	Lazurite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Goethite (Brown Ochre) WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Geothite mineral was found in Goethite (Brown Ochre)WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-3	Goethite (Brown Ochre) WC	Geothite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Sleeping Beauty Turquoise

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Turquoise mineral was found in Sleeping Beauty Turquoise

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-4	Sleeping Beauty Turquoise	Turquoise	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Kingman Green Turquoise

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Turquoise mineral was found in Kingman Green Turquoise

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-5	Kingman Green Turquoise	Turquoise	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Hematite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1 XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Hematite mineral was found in Hematite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-6	Hematite WC	Hematite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Hematite Violet WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Hematite mineral was found in Hematite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-7	Hematite Violet WC	Hematite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Hematite Burnt Scarlet WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Hematite mineral was found in Hematite Burnt Scarlet WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-8	Hematite Burnt Scarlet WC	Hematite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Tiger's Eye WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Quartz/Fe2O3 mineral was found in Tiger's Eye WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-9	Tiger's Eye WC	Quartz/Fe2O3	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Burnt Tiger's Eye WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Quartz/Fe2O3 mineral was found in Burnt Tiger's Eye WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-10	Burnt Tiger's Eye WC	Quartz/Fe2O3	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Amazonite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Amazonite mineral was found in Amazonite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-11	Amazonite WC	Amazonite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Purpurite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Purpurite mineral was found in Purpurite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-12	Purpurite WC	Purpurite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Rhodonite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Rhodonite mineral was found in Rhodonite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-13	Rhodonite WC	Rhodonite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Fuchsite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Fuchsite mineral was found in Fuchsite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-14	Fuchsite WC	Fuchsite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Sodalite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Sodalite mineral was found in Sodalite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-15	Sodalite WC	Sodalite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Zoisite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Zoisite mineral was found in Zoisite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-16	Zoisite WC	Zoisite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Kyanite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Kyanite mineral was found in Kyanite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-17	Kyanite WC	Kyanite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Blue Apatite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Hydroxyapatite mineral was found in Blue Apatite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-18	Blue Apatite WC	Hydroxyapatite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Green Apatite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Apatite mineral was found in Green Apatite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-19	Green Apatite WC	Apatite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Bronzite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Enstatite, Ferreon mineral was found in Bronzite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-20	Bronzite WC	Enstatite, Ferreon	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Amethyst WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Amethyst SiO2 mineral was found in Amethyst WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-21	Amethyst WC	Amethyst SiO2	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Burnt Bronzite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Enstatite, Ferreon mineral was found in Burnt Bronzite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-22	Burnt Bronzite WC	Enstatite, Ferreon	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Garnet WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Pyrope/Spessartine/Almadine mineral was found in Garnet WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-23	Garnet WC	Pyrope/Spessartine/Almadine	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Black Tourmaline WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Schorl/Hydroschorl mineral was found in Black Tourmaline WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-24	Black Tourmaline WC	Schorl/Hydroschorl	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Sicklerite WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Sicklerite (ferreon) mineral was found in Sicklerite WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-25	Sicklerite WC	Sicklerite (ferreon)	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Diopside WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Diopside mineral was found in Diopside WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-26	Diopside WC	Diopside	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Red Jasper WC

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the O2Si/Hematite mineral was found in Red Jasper WC

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415572-27	Red Jasper WC	O2Si / Hematite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

Clark Laboratory Test Report

Company:	Daniel Smith, Inc
Address:	4150 1st Avenue South Seattle, WA 98134
Sample	Primatek (mineral watercolors)
Report Number	TS 415737 Rev.0
Testing Dates	June 1, 2021 – June 8, 2021
Issue Date	June 10, 2021
Issued By	Clark Laboratory, LLC 1801 Route 51 South Jefferson Hills, PA 15025

Prepared By:	Approved By:
Cathy Aitken	Michelle Felicetti
Chemical Analyst	Analytical Chemistry GM
Clark Laboratory	Clark Laboratory

Revision History

REV #	DATE	PREPARED BY (CLARK)	SECTION	DESCRIPTION
0	6/10/21	Michelle Felicetti	All	Initial Release

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1. Summary of Results

Daniel Smith Inc.

SAMPLE #	Sample ID	Mineral	YES/NO
415737-1	Sedona Genuine	Gibbsite/Illmenite	Yes
415737-2	Yavapai Genuine	Yavalite	Yes
415737-3	Mummy Bauxite	Diaspore/Hematite	Yes
415737-4	Red Fuchsite Genuine	Muscovite	Yes
415737-5	Serpentine Genuine	Albite/Antigorite	Yes
415737-6	Piemontite Genuine	Piemontite	Yes
415737-7	Bloodstone Genuine	Qyartz/Fe2O3	Yes
415737-8	Jadeite Genuine	Jadeite	Yes
415737-9	Sugilite Genuine	Sugilite	Yes

1. Summary for Sedone Genuine

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the mineral Gibbsite/Illmenite was found in Sedona Genuine

2.1. Sample

Sample #	Sample ID	Mineral	Mineral Found Yes or No
415737-1	Sedona Genuine	Gibbsite/Illmenite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Yavapai Genuine

1.1 Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the mineral Yavalite was found in Yavapai Genuine

2.1 Sample

Sample #	Sample ID	Mineral	Yes or No
415737-2	Yavapai Genuine	Yavalite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Mummy Bauxite

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Diaspore/Hematite mineral was found in Mummy Bauxite

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415737-3	Mummy Bauxite	Diaspore/Hematite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Red Fuchsite Genuine

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Muscovite mineral was found in Red Fuchsite Genuine

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415737-4	Red Fuchsite Genuine	Muscovite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Serpentine Genuine

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Albite/Antigorite mineral was found in Serpentine Genuine

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415737-5	Serpentine Genuine	Albite/Antigorite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Piemontite Genuine

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1 XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Piemontite mineral was found in Piemontite Genuine

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415737-6	Piemontite Genuine	Piemontite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Bloodstone Genuine

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Quartz/Fe2O3 mineral was found in Bloodstone Genuine

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415737-7	Bloodstone Genuine	Quartz/Fe2O3	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Jadeite Genuine

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Jadeite mineral was found in Jadeite Genuine

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415737-8	Jadeite Genuine	Jadeite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.

1. Summary for Sugilite Genuine

1.1. Purpose

The purpose of this document is to present the necessary information to verify testing was performed in accordance with the referenced test procedure and standards. A satisfactory test will meet the following Criteria:

- The mineral content is found present in the paint sample

1.2. Equipment Description

1.2.1. XRD (Siemens Diffractometer)

- This method uses X-ray powder diffraction to semi-quantitatively determine selected phases present in solid samples where compositional data is available
- Siemens D500
- Software: MDI Data Scan & JADE

1.2.2. Instrumentation Calibration

Equipment and instrumentation were in calibration, traceable to the National Institute of Standards & Technology. Additionally, a qualified subcontractor performs annual leak checks and provides an appropriate Radiation Safety certificate.

2. Results

Based on the acceptance criteria, the Sugilite mineral was found in Sugilite Genuine

2.1. Sample

Sample #	Sample ID	Mineral	Yes or No
415737-9	Sugilite Genuine	Sugilite	Yes

The process and testing operations have been performed within the requirements of the Clark Laboratory Management System Manual, dated October 25, 2019.