



EMSL Analytical, Inc. - 107 Haddon Avenue
Westmont, NJ. 08108
(856) 858-4800

12/7/01

Attention: **U.S. EPA**
HQ Financial Services Division
1200 Pennsylvania Avenue
NW Maildrop 2734R
Washington, DC. 20460

Project: Residential Sampling
Ref. Number: 360100635 Revision 120201

**Crystalline Particle Analysis Performed by
X-Ray Diffraction (XRD)
Silica Analysis by Method NIOSH 7500**

Sample ID	Identification	Particle ID	Volume (L)	Nuisance Dust		Analyte Weight (mg)	Airborne Analyte		Analytical Sensitivity (mg/m ³)
				Sample Weight (mg)	Sample Conc. (mg/m ³)		Analyte Conc. (mg/m ³)	% Analyte	
[R]IF-O-10		Quartz	1225	0.411	0.3356	<0.004	<AS	N/A	0.0033
		Cristobalite				<0.012	<AS		0.0154
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0051
		Portland/ Lime				<0.02	<AS		0.0256
		Gypsum				<0.004	<AS		0.0051
		Mica				<0.011	<AS		0.0141
		Halite				<0.006	<AS		0.0077
		Fibrous Glass				N/A	N/A		N/A
[R]RF-C-10		Quartz	757	N/A	N/A	<0.004	<AS	N/A	0.0053
		Cristobalite				<0.012	<AS		0.0154
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0051
		Portland/ Lime				<0.02	<AS		0.0256
		Gypsum				<0.004	<AS		0.0051
		Mica				<0.011	<AS		0.0141
		Halite				<0.006	<AS		0.0077
		Fibrous Glass				N/A	N/A		N/A
[R]TF-C-10		Quartz	1181	0.073	0.0681	<0.004	<AS	N/A	0.0034
		Cristobalite				<0.012	<AS		0.0154
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0051
		Portland/ Lime				<0.02	<AS		0.0256
		Gypsum				<0.004	<AS		0.0051
		Mica				<0.011	<AS		0.0141
		Halite				<0.006	<AS		0.0077
		Fibrous Glass				N/A	N/A		N/A

John Newton
Analyst

28 November, 01
Date of Analysis

Disclaimer: The laboratory can only verify the concentration of silica on the filter and not the final concentration due to data obtained by non-laboratory personnel. In the absence of a bulk dust sample, the specific form of crystalline silica can not be determined.

Hence, alpha-quartz, the most prevalent form of crystalline silica, will be assumed. "<" = Less than the stated value

The lowest reportable value is equivalent to the Analytical Sensitivity which is calculated from the lowest reproducible concentration of silica detectable by the instrument.

AIPLA Accredited - Laboratory ID #100192

CONFIDENTIAL,

CITY_21MC100_003434007

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008


EMSL Analytical, Inc.

107 Haddon Avenue
Westmont, NJ. 08108
(856) 858-4800

12/7/01

Attention: **U.S.EPA**
HQ Financial Services Division
1200 Pennsylvania Avenue
NW Maildrop 2734R
Washington, DC. 20460

Project: Residential Sampling
Ref. Number: 360100635 Revision 120201

**Crystalline Particle Analysis Performed by
X-Ray Diffraction (XRD)
Silica Analysis by Method NIOSH 7500**

Sample ID	Identification	Particle ID	Volume (L)	Nuisance Dust		Airborne Analyte			
				Sample Weight (mg)	Sample Conc. (mg/m ³)	Analyte Weight (mg)	Analyte Conc. (mg/m ³)	% Analyte	Analytical Sensitivity (mg/m ³)
[R]IF-C-10		Quartz	1181	0.065	0.0551	<0.004	<AS	N/A	0.0034
		Cristobalite				<0.012	<AS		0.0154
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0051
		Portland/ Lime				<0.02	<AS		0.0256
		Gypsum				<0.004	<AS		0.0051
		Mica				<0.011	<AS		0.0141
		Halite				<0.006	<AS		0.0077
		Fibrous Glass				N/A	N/A		N/A
[R]RF-R1-10		Quartz	782	N/A	N/A	<0.004	<AS	N/A	0.0052
		Cristobalite				<0.012	<AS		0.0154
		Tridymite				N/A	N/A		N/A
		Calcite				0.006	0.0079		0.0051
		Portland/ Lime				<0.02	<AS		0.0256
		Gypsum				<0.004	<AS		0.0051
		Mica				<0.011	<AS		0.0141
		Halite				<0.006	<AS		0.0077
		Fibrous Glass				N/A	N/A		N/A
[R]TF-R1-10		Quartz	1227	0.112	0.0913	<0.004	<AS	N/A	0.0033
		Cristobalite				<0.012	<AS		0.0154
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0051
		Portland/ Lime				<0.02	<AS		0.0256
		Gypsum				<0.004	<AS		0.0051
		Mica				<0.011	<AS		0.0141
		Halite				<0.006	<AS		0.0077
		Fibrous Glass				N/A	N/A		N/A

John Newton
Analyst

28 November, 01
Date of Analysis

Disclaimer: The laboratory can only verify the concentration of silica on the filter and not the final concentration due to data obtained by non-laboratory personnel. In the absence of a bulk dust sample, the specific form of crystalline silica can not be determined.

Hence, alpha-quartz, the most prevalent form of crystalline silica, will be assumed. "<" = Less than the stated value

The lowest reportable value is equivalent to the Analytical Sensitivity which is calculated from the lowest reproducible concentration of silica detectable by the instrument.
AHLA Accredited - Laboratory ID #100192

CONFIDENTIAL,

CITY_21MC100_003434008

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008



EMSL Analytical, Inc. - 107 Haddon Avenue
Westmont, NJ. 08108
(856) 858-4800

12/7/01

Attention: **U.S.EPA**
EQ Financial Services Division
1200 Pennsylvania Avenue
NW Maildrop 2734R
Washington, DC. 20460

Project: Residential Sampling
Ref. Number: 360100635 Revision 120201

**Crystalline Particle Analysis Performed by
X-Ray Diffraction (XRD)
Silica Analysis by Method NIOSH 7500**

Sample ID	Identification	Particle ID	Volume (L)	Nuisance Dust		Airborne Analyte		% Analyte	Analytical Sensitivity (mg/m ³)
				Sample Weight (mg)	Sample Conc. (mg/m ³)	Analyte Weight (mg)	Analyte Conc. (mg/m ³)		
[R]F-R1-10		Quartz	1220	0.028	0.0230	<0.004	<AS	N/A	0.0033
		Cristobalite				<0.012	<AS		0.0154
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0051
		Portland/ Lime				<0.02	<AS		0.0256
		Gypsum				<0.004	<AS		0.0051
		Mica				<0.011	<AS		0.0141
		Halite				<0.006	<AS		0.0077
		Fibrous Glass				N/A	N/A		N/A
[R]RF-R2-10		Quartz	767	N/A	N/A	<0.004	<AS	N/A	0.0052
		Cristobalite				<0.012	<AS		0.0154
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0051
		Portland/ Lime				<0.02	<AS		0.0256
		Gypsum				<0.004	<AS		0.0051
		Mica				<0.011	<AS		0.0141
		Halite				<0.006	<AS		0.0077
		Fibrous Glass				N/A	N/A		N/A
[R]TF-R2-10		Quartz	1224	0.270	0.2206	<0.004	<AS	N/A	0.0033
		Cristobalite				<0.012	<AS		0.0154
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0051
		Portland/ Lime				<0.02	<AS		0.0256
		Gypsum				<0.004	<AS		0.0051
		Mica				<0.011	<AS		0.0141
		Halite				<0.006	<AS		0.0077
		Fibrous Glass				N/A	N/A		N/A

John Newton
Analyst

28 November, 01
Date of Analysis

Disclaimer: The laboratory can only verify the concentration of silica on the filter and not the final concentration due to data obtained by non-laboratory personnel. In the absence of a bulk dust sample, the specific form of crystalline silica can not be determined. Hence, alpha-quartz, the most prevalent form of crystalline silica, will be assumed. " $<$ " = Less than the stated value. The lowest reportable value is equivalent to the Analytical Sensitivity which is calculated from the lowest reproducible concentration of silica detectable by the instrument. AIHA Accredited - Laboratory ID #100192

CONFIDENTIAL,

CITY_21MC100_003434009

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008



EMSL Analytical, Inc. - 107 Haddon Avenue
Westmont, NJ. 08108
(856) 858-4800

12/7/01

Attention: U.S.EPA
HQ Financial Services Division
1200 Pennsylvania Avenue
NW Maildrop 2734R
Washington, DC. 20460

Project: Residential Sampling
Ref. Number: 360100635 Revision 120201

**Crystalline Particle Analysis Performed by
X-Ray Diffraction (XRD)
Silica Analysis by Method NIOSH 7500**

Sample ID	Identification	Particle ID	Volume (L)	Nuisance Dust		Airborne Analyte			Analytical Sensitivity (mg/m ³)
				Sample Weight (mg)	Sample Conc. (mg/m ³)	Analyte Weight (mg)	Analyte Conc. (mg/m ³)	% Analyte	
[R]JF-R2-10		Quartz	1228	0.034	0.0277	<0.004	<AS	N/A	0.0033
		Cristobalite				<0.012	<AS		0.0154
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0051
		Portland/ Lime				<0.02	<AS		0.0256
		Gypsum				<0.004	<AS		0.0051
		Mica				<0.011	<AS		0.0141
		Halite				<0.006	<AS		0.0077
		Fibrous Glass				N/A	N/A		N/A
[R]BRF-A-10		Quartz	0	N/A	N/A	<0.004			
		Cristobalite				<0.012			
		Tridymite				N/A			
		Calcite				<0.004			
		Portland/ Lime				<0.02			
		Gypsum				<0.004			
		Mica				<0.011			
		Halite				<0.006			
		Fibrous Glass				N/A			
[R]BRF-B-10		Quartz	0	N/A	N/A	<0.004			
		Cristobalite				<0.012			
		Tridymite				N/A			
		Calcite				<0.004			
		Portland/ Lime				<0.02			
		Gypsum				<0.004			
		Mica				<0.011			
		Halite				<0.006			
		Fibrous Glass				N/A			

John Newton
Analyst

28 November, 01
Date of Analysis

Disclaimer: The laboratory can only verify the concentration of silica on the filter and not the final concentration due to data obtained by non-laboratory personnel. In the absence of a bulk dust sample, the specific form of crystalline silica can not be determined.

Hence, alpha-quartz, the most prevalent form of crystalline silica, will be assumed. "<" = Less than the stated value

The lowest reportable value is equivalent to the Analytical Sensitivity which is calculated from the lowest reproducible concentration of silica detectable by the instrument.
AIHA Accredited - Laboratory ID #100192

CONFIDENTIAL,

CITY_21MC100_003434010

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008



EMSL Analytical, Inc. - 107 Haddon Avenue
Westmont, NJ. 08108
(856) 858-4800

12/7/01

Attention: **U.S.EPA**
HQ Financial Services Division
1200 Pennsylvania Avenue
NW Maildrop 2734R
Washington, DC. 20460

Project: Residential Sampling
Ref. Number: 360100635 Revision 120201

**Crystalline Particle Analysis Performed by
X-Ray Diffraction (XRD)
Silica Analysis by Method NIOSH 7500**

Sample ID	Identification	Particle ID	Volume (L)	Nuisance Dust		Analyte Weight (mg)	Airborne Analyte		Analytical Sensitivity (mg/m ³)
				Sample Weight (mg)	Sample Conc. (mg/m ³)		Analyte Conc. (mg/m ³)	% Analyte	
[R]BTF-A-10		Quartz	0	0.814	N/A	<0.004			
		Cristobalite				<0.012			
		Tridymite				N/A			
		Calcite				<0.004			
		Portland/ Lime				<0.02			
		Gypsum				<0.004			
		Mica				<0.011			
		Halite				<0.006			
		Fibrous Glass				N/A			
[R]BTF-B-10		Quartz	0	0.052	N/A	<0.004			
		Cristobalite				<0.012			
		Tridymite				N/A			
		Calcite				<0.004			
		Portland/ Lime				<0.02			
		Gypsum				<0.004			
		Mica				<0.011			
		Halite				<0.006			
		Fibrous Glass				N/A			

John Newton
Analyst

28 November, 01
Date of Analysis

Disclaimer: The laboratory can only verify the concentration of silica on the filter and not the final concentration due to data obtained by non-laboratory personnel. In the absence of a bulk dust sample, the specific form of crystalline silica can not be determined.

Hence, alpha-quartz, the most prevalent form of crystalline silica, will be assumed. "<" = Less than the stated value

The lowest reportable value is equivalent to the Analytical Sensitivity which is calculated from the lowest reproducible concentration of silica detectable by the instrument.

AIHA Accredited - Laboratory ID #100192

CONFIDENTIAL,

CITY_21MC100_003434011

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008