

**Institute of Public Health in Ostrava**

Centre of Hygienic Laboratories

CAI Accredited Testing Laboratory No.1393 according to SN EN ISO/IEC 17025:2005

Partyzánské nám stí 7, 702 00 Ostrava

**TEST REPORT No. 793/2018**

**Customer :** CRYSTAL COLLOIDALS  
Thomas Alva Edisonweg 3  
6045 GN Roermond  
NL

**Set No. :** 35  
**Sample Received :** 2.1.2018 12:00  
**Sample Analyzed :** 2.1.2018 - 16.1.2018  
**Ref. No. :** ZU/ZU/01044/2016  
**File No. :** S-ZU/ZU/01044/2016  
**File code :** 4.0.3

**Sample No. :** 173  
**Sampling date :** Not mentioned **Sampling time:**Not mentioned  
**Sample name:** Sample 1 - Sovereign Silver 10 ppm batch FE105K 04/20/20  
**Sample amount :** 59 ml  
**Sample Type :** Colloids  
**Mode of sampling :** Not mentioned

**Results - chemical analysis**

Parameter	Value	Unit	Type	Method used	Uncertainty
Ag	11,9	mg/l	A	SOP OV 201 <sup>2</sup>	±20%
Mean particle size	52	nm	A	SOP OV 204 <sup>2</sup>	±20%

**Notice to sampling :** The sampling itself is not a subject of accreditation.

**Notice to analysis :**

The share of ion silver is 98,9% of total content of silver.

**Sample No. :** 174  
**Sampling date :** Not mentioned **Sampling time:**Not mentioned  
**Sample name:** Sample 2 - Sovereign Silver 10 ppm batch FL105S 09/20/20  
**Sample amount :** 29 ml  
**Sample Type :** Colloids  
**Mode of sampling :** Not mentioned

**Results - chemical analysis**

Parameter	Value	Unit	Type	Method used	Uncertainty
Ag	11,5	mg/l	A	SOP OV 201 <sup>2</sup>	±20%
Mean particle size	9	nm	A	SOP OV 204 <sup>2</sup>	±20%

**Notice to sampling :** The sampling itself is not a subject of accreditation.

**Notice to analysis :**

The share of ion silver is 98,3% of total content of silver.

**Method specification :**

SOP OV 201 ( SN EN ISO 17294-1, SN EN ISO 17294-2)

SOP OV 204 (metodika zpracovaná v rámci EU projektu NANoREG:„SOP for measurement of hydrodynamic Size-Distribution and Dispersion Stability by Dynamic Light Scattering (DLS), 2016)

**Laboratory workplace :**

<sup>(2)</sup> - Analyses performed at Ostrava (Partyzánské nám. 7, 702 00 Ostrava)

Methods in TYPE column: "A" accredited test

< - the result is below the detection limit, > - the result is higher than the value presented

Results deal with tested samples only.

Without a written consent of the laboratory, this Report can be reproduced only complete.

These expanded uncertainties of measurement are obtained by multiplying of standard uncertainty of measurement by extending coefficient  $k=2$  (for confidence level 95%). Uncertainty of sampling not included.

**Head of Hygienic Laboratories Center : Doškálová Šárka, RNDr.**

**Checked by :** Lach Karel, Ing. CSc.

**Completed by :** Lach Karel, Ing. CSc.

**Number of pages :** 2

**Date :** 16.1.2018

Ing. Zdeňka Dardová  
Head of Department of Sampling and Servicing



## Size Distribution Report by Number

### Sample Details

**Sample Name:** 173\_35\_2018\_Sovereign Silver\_For kids FE105K 04-20-20 avg

**SOP Name:** nanoAg.sop

**General Notes:** Average result created from record number(s): 815 816 817 818

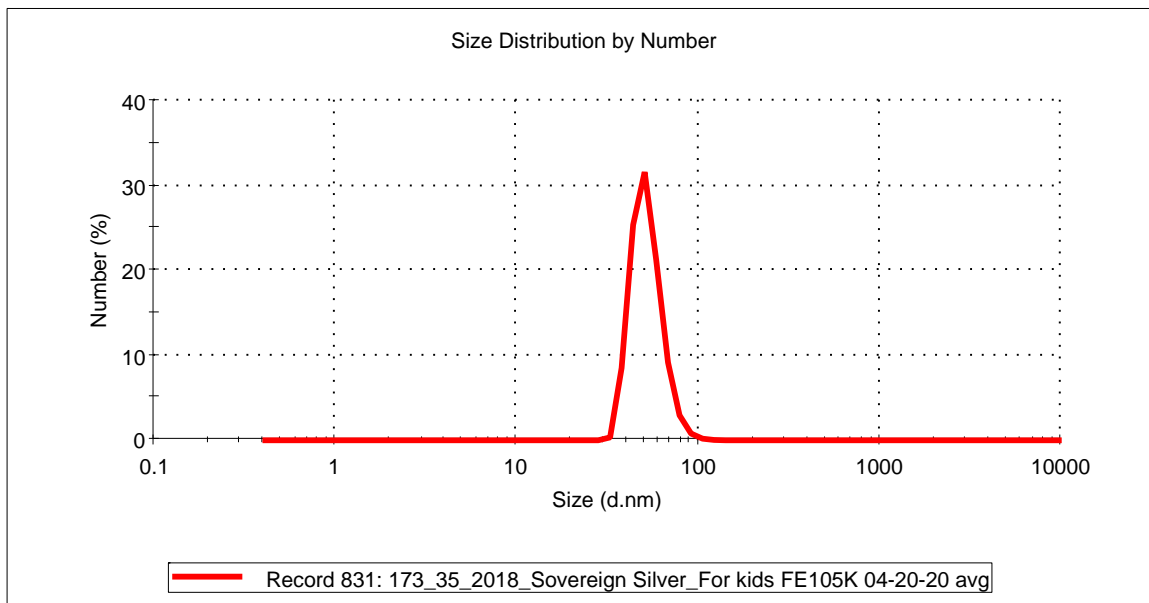
<b>File Name:</b> CRYSTAL colloidal.dts	<b>Dispersant Name:</b> Water
<b>Record Number:</b> 831	<b>Dispersant RI:</b> 1.330
<b>Material RI:</b> 0.14	<b>Viscosity (cP):</b> 0.8872
<b>Material Absorbtion:</b> 3.99	<b>Measurement Date and Time:</b> 10. ledna 2018 13:29:09

### System

<b>Temperature (°C):</b> 25.0	<b>Duration Used (s):</b> 60
<b>Count Rate (kcps):</b> 315.6	<b>Measurement Position (mm):</b> 4.65
<b>Cell Description:</b> Disposable sizing cuvette	<b>Attenuator:</b> 8

### Results

	<b>Size (d.nm):</b>	<b>% Number</b>
<b>Peak 1:</b>	52.42	100.0
<b>Peak 2:</b>	0.000	0.0
<b>Peak 3:</b>	0.000	0.0





## Size Distribution Report by Number

### Sample Details

**Sample Name:** 174\_35\_2018\_Sovereign Silver\_Bio Active FL015S 09-20-20 avg

**SOP Name:** nanoAg.sop

**General Notes:** Average result created from record number(s): 822 823 824 825 826 827 828 829 830

**File Name:** CRYSTAL colloidal.dts      **Dispersant Name:** Water

**Record Number:** 832      **Dispersant RI:** 1.330

**Material RI:** 0.14      **Viscosity (cP):** 0.8872

**Material Absorbtion:** 3.99      **Measurement Date and Time:** 10. ledna 2018 13:32:19

### System

**Temperature (°C):** 25.0      **Duration Used (s):** 70

**Count Rate (kcps):** 177.7      **Measurement Position (mm):** 4.65

**Cell Description:** Disposable sizing cuvette      **Attenuator:** 10

### Results

	Size (d.nm):	% Number
<b>Peak 1:</b>	8.713	99.9
<b>Peak 2:</b>	40.82	0.1
<b>Peak 3:</b>	0.000	0.0

