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MESSAGE ABOUT
ACCESSING THE
SRM WEBSITE**

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New and Renewal NIST SRMs/RMs

NIST RM 8281 Single-Wall Carbon Nanotubes (Dispersed, Three Length-Resolved Populations)

A significant issue for method development and validation testing of dispersed nanomaterials is the availability of common populations for intercomparisons. The exact dispersed population from one lot of material to the next can vary significantly depending on the details of applied processing steps. Significant variation can also result even within an individual lot of the synthesized material.

RM 8281 is intended to address this issue by providing a common set of single-wall carbon nanotube (SWCNT) dispersions of varying aspect ratio and purity for measurement comparisons. The nanotube length populations were produced through a centrifugation-based length separation method from a parent SWCNT dispersion generated from SRM 2483 Single-Wall Carbon Nanotubes (Raw Soot). The RM comprises three length populations that were separated from multiple length fractions. After an exchange of the dispersing medium with fresh surfactant solution, each of the three nanotube populations was sealed in pre-cleaned glass ampoules under an inert gas layer. The ampoules were then irradiated with gamma rays to sterilize the vial contents. Additional details of the sample preparation, methods, and sterilization process are available [1]. A unit of RM 8281 consists of three ampoules containing approximately 2.5 mL each of the three different average length single-wall carbon nanotubes dispersions in surfactant (Long, Medium, and Short populations). The surfactant is sodium deoxycholate and is present at a concentration of 10 g/L in each of the dispersions. A fourth ampoule containing approximately 2.5 mL of an equivalent concentration of surfactant solution and subjected to the same processing as the nanotube dispersions is included as a blank; no reference values are provided for this sample.



[1] Fagan, J.A.; Lin, N.J.; Zeisler, R.; Hight Walker, A.R.; *Effects of Gamma Irradiation for Sterilization on Aqueous Dispersions of Length Sorted Carbon Nanotubes*; Nano Research, Vol. 4, pp. 393–404 (2011).

Technical Contact: Jeffrey Fagan
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SRM 1549a Whole Milk Powder

Standard Reference Material (SRM) 1549a Whole Milk Powder is the newest food-matrix material available from NIST. This material replaces SRM 1549 Non-Fat Milk Powder and RM 8435 Whole Milk Powder, which are no longer available. SRM 1549a is a non-fortified whole milk powder. A unit of SRM 1549a consists of five heat-sealed aluminized pouches, each containing approximately 10 g of material.

This SRM is intended for use in method development and validation as well as for quality assurance and for use in assigning values to in-house control materials. It is important for laboratories in the food and nutrition industries to analyze a material for quality assurance that is compositionally similar to that of the test samples being analyzed. A triangle (shown below) in which foods are positioned based on their fat, protein, and carbohydrate content, can be used to help select an appropriate quality control material. SRM 1549a Whole Milk Powder is located in sector 6 of this triangle, and will provide a unique matrix for laboratories interested in analysis of an unfortified materials of similar composition. Certified values are assigned for cholesterol and eleven fatty acids, ten elements, and eight vitamins. Reference values are assigned for five elements including iodine, four vitamins, proximates, calories, nine fatty acids, and seventeen amino acids.



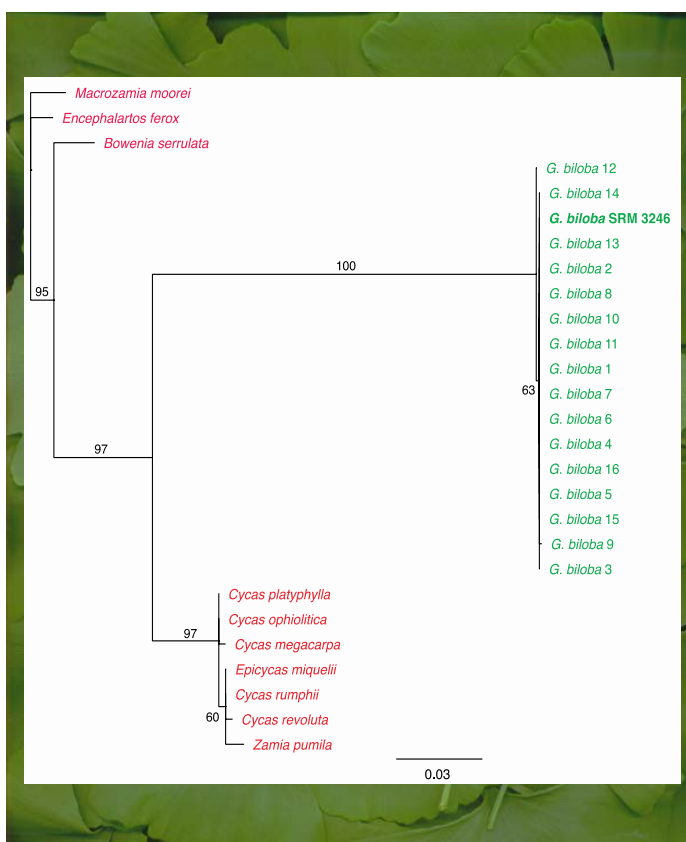
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NIST Dietary Supplement Reference Material for Authenticity: SRM 3246 *Ginkgo biloba* (Leaves).

NIST recently added species identification as a certified property to SRM 3246 *Ginkgo biloba* (Leaves). Current Good Manufacturing Practices (cGMP), enforced by the U.S. Food and Drug Administration (FDA) require identity testing of dietary ingredient components to prevent accidental or intentional (economically motivated) adulteration of dietary supplement products. Through the addition of identity data, NIST is helping to support industry and protect public health.

Sanger sequencing was used on two independent chloroplast gene regions, psbA-trnH intergenic and trnL intron regions, for authentication of SRM 3246. Chloroplast DNA sequences from authenticated *Ginkgo biloba* samples were used to establish inclusivity; chloroplast DNA sequences from close relatives were used to establish exclusivity. (See the Certificate of Analysis, available at <http://www.nist.gov/srm>, for more detail.) Authenticity data will be added to other botanical dietary supplement SRMs and RMs in the near future.

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PITTCON 2014 Speakers - March 2–6, 2014, Chicago, IL

Date	NIST Staff	Event Title	Time	Location
02-Mar-2014	Jennifer Carney	A New Atmospheric Sulfur Hexafluoride Gas Standard Suite	2:10 pm	Room S405b
02-Mar-2014	Andrea Centrone	Surface-Enhanced Photothermal Induced Resonance (SE-PTIR): A New Method for Imaging Near Field Hot Spots and Dark Plasmonic Modes	3:05 pm	Room S404d
03-Mar-2014	Thomas Vetter	Development of a Reductometric Assay for Sodium Oxalate (Poster)	10:00 am - 12:00 pm	Expo Floor, Aisles 1000-2500
05-Mar-2014	John Elliott Schiel	Establishment of NIST Monoclonal Antibody Reference Material (Poster)	1:00 - 3:00 pm	Expo Floor, Aisles 1000-2500
05-Mar-2014	Steve Stein	Identifying the 'Dark Matter' in GC/MS and LC/MS Experiments (Symposia)	1:35 pm	Room S404a
06-Mar-2014	Marilyn E. Jacox	Fifty Years - and Counting - in Molecular Spectroscopy	9:10 am	Room S405b

ORDER NIST SRMs ONLINE

You can now order NIST SRMs through our online ordering system, which is continually updated. This system is efficient, user-friendly, and secure. Our improved search function finds keywords on SRM detail pages as well as words in titles. **PLEASE NOTE:** Purchase orders and credit cards may be used when ordering an SRM online. Also note that we are placing many historical archive certificates online for your convenience.

<https://www-s.nist.gov/srmors>

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Registering will ensure that you will be notified of any technical updates or developments.

http://www.nist.gov/srm_reg

Renewals

SRM 185i	Potassium Hydrogen Phthalate pH Standard
SRM 927e	Bovine Serum Albumin (7 % Solution)
SRM 1549a	Whole Milk Powder
SRM 1659a	Methane in Air (Nominal Amount-of-Substance Fraction 10 $\mu\text{mol/mol}$), Lot 11-H-XX
SRM 2092	Low-Energy Charpy V-Notch Impact Specimen
SRM 2096	High-Energy Charpy V-Notch Impact Specimen
SRM 2635a	Carbon Monoxide in Nitrogen (Nominal Amount-of-Substance Fraction 25 $\mu\text{mol/mol}$), Lot 58-E-XX
SRM 2659a	Oxygen in Nitrogen (Nominal Amount-of-Substance Fraction 21 % mol/mol), Lot 71-E-XX
SRM 2685c	Bituminous Coal (Nominal Mass Fraction 5 % Sulfur)
SRM 2723b	Sulfur in Diesel Fuel Oil (Nominal Mass Fraction 10 mg/kg)
SRM 2745	Carbon Dioxide in Nitrogen (Nominal Amount-of-Substance Fraction 16 % mol/mol), Lot 9-D-XX
SRM 2750	Methane in Air (Nominal Amount-of-Substance Fraction 50 $\mu\text{mol/mol}$), Lot 211-D-XX
SRM 2897a	Ethanol-Water Solution (Nominal Mass Fraction 2 %)
SRM 2898a	Ethanol-Water Solution (Nominal Mass Fraction 6 %)

Revisions

Certificate Revisions: Are You Using These Materials?

This is a list of our most recent certificate revisions. NIST updates certificates for a variety of reasons, such as to extend the expiration date or to include additional information gained from stability testing. Users of NIST Standard Reference Materials should ensure that they have the current certificates. You can print or view a copy of the current certificate at our website at <http://www.nist.gov/srm>, or contact the Office of Reference Materials at **phone** 301-975-2200, **fax** 301-926-4751, or **email** srminfo@nist.gov.

SRM 173c Titanium Alloy (6Al-4V)

Editorial changes

SRM 189c Potassium Tetroxalate Dihydrate pH Buffer, Lot 080606

Editorial changes

SRM 191d pH Standard

Editorial changes

SRM 368 Carbon Steel (AISI 1211)

Editorial changes

SRM 654b Titanium-Base Alloy (6Al-4V)

Editorial changes

SRM 917c D-Glucose (Dextrose)

New expiration date : 01 March 2021

Editorial changes

SRM 1224 Carbon Steel (AISI 1078)

Technical changes

Editorial changes

SRM 1358a Coating Thickness Standard

Editorial changes

SRM 1358b Coating Thickness Standard

Editorial changes

SRM 1359b Coating Thickness Standard

Editorial changes

SRM 1361b Coating Thickness Standard

Editorial changes

SRM 1362b Coating Thickness Standard

Editorial changes

Revisions (continued)

SRM 1363b Coating Thickness Standard

Editorial changes

SRM 1364b Coating Thickness Standard

Editorial changes

SRM 1474a Polyethylene Resin

Editorial changes

SRM 1568b Rice Flour

Editorial changes

SRM 1619b Sulfur in Residual Fuel Oil (0.7 %)

New expiration date: 01 July 2021

Editorial changes

SRM 1650b Diesel Particulate Matter

New expiration date: 31 December 2022

Editorial changes

SRM 1664a Sulfur Dioxide in Nitrogen (Nominal Amount-of-Substance 100 $\mu\text{mol/mol}$), Lot 91-E-XX

Editorial changes

SRM 1679c Carbon Monoxide in Nitrogen (Nominal Amount-of-Substance 100 $\mu\text{mol/mol}$), Lot 3-J-XX

Editorial changes

SRM 1680b Carbon Monoxide in Nitrogen (Nominal Amount-of-Substance 500 $\mu\text{mol/mol}$), Lot 2-I-XX

New expiration date: 20 February 2017

SRM 1681b Carbon Monoxide in Nitrogen (Nominal Amount-of-Substance 1000 $\mu\text{mol/mol}$), Lot 1-K-XX

New expiration date: 26 September 2021 Editorial changes

SRM 1727 Anode Tin

New expiration date: 01 January 2028

Editorial changes

SRM 1728 Tin Alloy (Sn-3Cu-0.5Ag)

Editorial changes

SRM 1729 Tin Alloy (97Sn-3Pb)

Editorial changes

Revisions (continued)

SRM 1849a Infant/Adult Nutritional Formula

Editorial changes

Technical changes

SRM 1887b Portland Cement

Editorial changes

SRM 1952a Cholesterol in Human Serum

New expiration date: 30 September 2018

Editorial changes

SRM 1955 Homocysteine and Folate in Human Serum

New expiration date: 31 December 2018

Editorial changes

SRM 1958 Contaminants in Human Serum (fortified)

Editorial changes

SRM 2092 Low-Energy Charpy V-Notch Impact Specimen (NIST-Verification)

Editorial changes

SRM 2096 High-Energy Charpy V-Notch Impact Specimen (NIST-Verification)

Editorial changes

SRM 2098 Super High-Energy Charpy V-Notch Impact Specimen (NIST-Verification)

Editorial changes

SRM 2242 Relative Intensity Correction Standard for Raman Spectroscopy: 532 nm Excitation

New expiration date: 30 September 2018

Editorial changes

SRM 2298 Sulfur in Gasoline (High Octane)

New expiration date: 30 September 2016

Editorial changes

SRM 2299 Sulfur in Gasoline (Reformulated)

New expiration date: 30 September 2016

Editorial changes

SRM 2384 Baking Chocolate

Editorial changes

Revisions (continued)

SRM 2492 Bingham Paste Mixture for Rheological Measurements

Editorial changes

SRM 2614a Carbon Monoxide in Air (Nominal Amount-of-Substance Fraction 45 $\mu\text{mol/mol}$),

Lot 21-G-XX

Editorial changes

SRM 2617 Carbon Dioxide in Nitrogen (Nominal Amount-of-Substance Fraction 500 $\mu\text{mol/mol}$),

Lot 26-A-XX

Editorial changes

SRM 2622a Carbon Dioxide in Nitrogen (Nominal Amount-of-Substance Fraction 2 % mol/mol),

Lot 33-E-XX

Editorial changes

SRM 2637a Carbon Monoxide in Nitrogen (Nominal Amount-of-Substance Fraction 2500 $\mu\text{mol/mol}$),

Lot 56-E-XX

New expiration date: 09 November 2015

SRM 2659 Oxygen in Nitrogen (Nominal Amount-of-Substance Fraction 21 % mol/mol), Lot 71-D-XX

New expiration date: 23 August 2021

SRM 2669 Arsenic Species in Frozen Human Urine

New expiration date: 31 December 2023

Editorial changes

SRM 2685 Bituminous Coal (Nominal Mass Fraction 5 % Sulfur)

Editorial changes

SRM 2696 Silica Fume

New expiration date: 01 May 2023

Editorial changes

SRM 2701 Hexavalent Chromium in Contaminated Soil (High Level)

New expiration date: 31 December 2018

Editorial changes

SRM 2786 Fine Particulate Matter (<4 μm)

New expiration date: 30 September 2026

Editorial changes

SRM 2787 Fine Particulate Matter (<10 μm)

New expiration date: 30 September 2026

Editorial changes

Revisions (continued)

SRM 2975 Diesel Particulate Matter (Industrial Forklift)

New expiration date: 31 January 2022

Editorial changes

SRM 3101a Aluminum (Al) Standard Solution, Lot 060502

New expiration date: 18 April 2015

Editorial changes

SRM 3109a Calcium (Ca) Standard Solution, Lot 050825

New expiration date: 01 June 2015

Editorial changes

SRM 3163 Tungsten (W) Standard Solution, Lot 080331

New expiration date: 10 August 2015

Editorial changes

SRM 3169 Zirconium (Zr) Standard Solution, Lot 071226

New expiration date: 19 June 2014

Editorial changes

SRM 3234 Soy Flour

Editorial changes

SRM 3246 *Ginkgo biloba* (Leaves)

Editorial changes

SRM 3278 Tocopherols in Edible Oils

New expiration date: 30 August 2017

Editorial changes

SRM 3280 Multivitamin/Multielement Tablets

Editorial changes

SRM 8040 Sodium Oxalate

New expiration date: 07 November 2015

Editorial changes

SRM 8445 Spray-Dried Whole Egg for Allergen Detection

New expiration date: 15 June 2014

SRM 8642 FDA Saxitoxin Dihydrochloride Solution

New expiration date: 01 July 2018

Editorial changes

SRM 8988 Titanium Dioxide Powder - Particle Size Distribution

Editorial changes

NIST SRM 2014 Exhibit Schedule

Pittsburgh Conference PITTCON

March 2-6, 2014
Booth #3944-4045
McCormick Place South
Chicago, IL



ACS Spring Meeting

March 16-20, 2014
Booth #402
Dallas Convention Center
Dallas, TX

Analytica 2014

April 1-4, 2014
Booth #A2/409
Messe Munchen
Munich, Germany

Material Research Society Spring Meeting

April 21-25, 2014
Moscone West
San Francisco, CA

The American Society of Crime Laboratories Directors

May 4-8, 2014
Double Tree Resort
Scottsdale, AZ

IFT-Food Expo

June 21-24, 2014
Booth #5012
Ernest M. Morial Convention Center
New Orleans, LA

AACC Clinical Lab Expo

July 29-31, 2014
Booth #2458
McCormick Place
Chicago, IL

American Chemical Society Fall Meeting

August 10-14, 2014
San Francisco Convention Center
San Francisco, CA

AOAC International

September 7-10, 2014
Boca Raton Resort & Club
Boca Raton, FL

MS&T'14 Materials Science & Technology Conference and Exhibition

October 27-31, 2014
David Lawrence Convention Center
Pittsburgh, PA

Material Research Society Fall Meeting

November 30 – December 5, 2014
Hynes Convention Center
Boston, MA

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For Mozilla Firefox

- 1) You must have version 3.0.5 or later
- 2) Enable SSL 3.0
- 3) Enable TLS 1.0

To enable SSL 3.0 and TLS 1.0

- 1) Go to Tools > Options
- 2) Click on the Advanced icon
- 3) Click the Encryption tab
- 4) Under Protocols, make sure both boxes are checked

For Internet Explorer

- 1) You must have version 6.0 or later
- 2) Enable SSL 3.0
- 3) Enable TLS 1.0

To enable SSL 3.0 and TLS 1.0

- 1) Go to Tools > Internet Options
- 2) Click on the Advanced tab
- 3) Scroll down to Security
- 4) Make sure that both SSL 3.0 and TLS 1.0 are checked

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NIST Measurement Services Websites of Interest

Standard Reference Materials



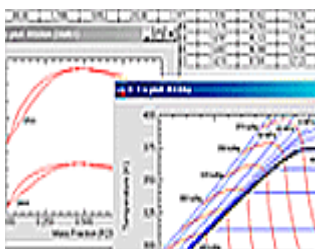
Standard Reference Materials

<http://www.nist.gov/srm>

Historical Archived Certificates/Reports of Investigation

<https://www-s.nist.gov/srmors/certArchive.cfm>

Standard Reference Data



NIST Scientific and Technical Databases

<http://www.nist.gov/srd>

NIST Data Gateway

<http://srdata.nist.gov/gateway>

Calibrations



Calibrations Services

<http://www.nist.gov/calibrations>

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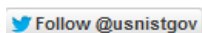
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