National Institute of Standards & Technology (NIST) SRM Customer Questionnaire

<SRM 1849a Infant/Adult Nutritional Formula>

NIST is conducting this survey of recent customers to better design SRM products in the future. You are receiving this questionnaire as a customer of NIST who has purchased at least one unit of <SRM 1849a Infant/Adult Nutritional Formula> in the past 5 years.

Customer Information

Laboratory Name:Click here to enter text.Laboratory Location:Click here to enter text.Respondent Name:Click here to enter text.Respondent Email:Click here to enter text.Respondent Phone:Click here to enter text.

□ I am willing to be contacted by NIST staff via email and/or phone to provide additional information.

Which of the following best describe(s) your laboratory? Check all that apply.

- □ Academic laboratory
- □ Government laboratory
- □ Food manufacturer (QA/QC) laboratory
- □ Third-party testing laboratory
- $\hfill\square$ Research and development
- □ Other (please describe): Click here to enter text.

Which of the following best describe(s) your general research area or interests? Check all that apply.

- □ Nutrition labeling
- □ Food safety/contaminants
- □ Food research (general)
- □ Dietary supplements research (general)
- □ Other (please describe): Click here to enter text.

Use of <SRM 1849a Infant/Adult Nutritional Formula>

- 1. For which of the following analytes or groups of analytes has your laboratory used <SRM 1849a Infant/Adult Nutritional Formula>? This is an all-inclusive list. Some categories may be removed if there are no assigned values in the SRM being queried.
 - □ Cholesterol
 - □ Elements
 - □ Toxic Elements/Contaminants
 - □ Water-Soluble Vitamins
 - □ Fat-Soluble Vitamins
 - \Box Carotenoids
 - □ Proximates
 - □ Fatty Acids
 - \Box Amino Acids
 - □ Sugars
 - □ Other (e.g., cholesterol, catechins, xanthines, flavonoids)

For every box selected in response to question 1, up to ten follow-up questions will be generated as described below.

a. For which of the following elements has your laboratory used <SRM 1849a Infant/Adult Nutritional Formula>? This is an all-inclusive list. Some may be removed if there are no assigned values in the SRM being queried.

Nutritional Elements

□ Calcium

□ Copper

□ Magnesium

□ Manganese

□ Phosphorus

□ Potassium

Trace Minerals

□ Molybdenum

□ Chromium

□ Selenium

□ Sodium

 \Box Zinc

□ Iron

Other Elements Aluminum

- \Box Antimony
 - □ Barium
- □ Boron
- □ Bromine
- □ Cerium
- Cesium
- □ Chlorine
- \Box Cobalt
- Europium
- □ Fluoride
- □ Gadolinium
- \Box Gold
- 🗆 Hafnium
- □ Hydrogen
- □ Iodine
- □ Lanthanum
- □ Lithium

- □ Neodymium
- □ Nickel
- □ Nitrogen
- □ Rubidium
- □ Samarium
- □ Scandium
- □ Silicon
- □ Silver
- □ Strontium
- □ Sulfur
- 🛛 Terbium
- □ Thorium
- 🗆 Tin
- □ Titanium
- □ Tungsten
- □ Uranium
- □ Vanadium
- □ Ytterbium

- b. For which of the following toxic elements/contaminants has your laboratory used <SRM 1849a Infant/Adult Nutritional Formula>? This is an all-inclusive list. Some may be removed if there are no assigned values in the SRM being queried.
- □ Arsenic
- \Box Cadmium
- □ Lead
- □ Mercury
- □ Dimethylarsinic acid (DMA)
- □ Inorganic arsenic (iAs)

- □ Monomethylarsonic acid (MMA)
- □ Methylmercury
- □ Acrylamide
- □ Aflatoxin B1
- \Box Aflatoxin B2
- □ Total Aflatoxins
- c. For which of the following water-soluble vitamins has your laboratory used <SRM 1849a Infant/Adult Nutritional Formula>? This is an all-inclusive list. Some may be removed if there are no assigned values in the SRM being queried.
- \Box Ascorbic Acid (Vitamin C)
- □ Biotin
- 🗆 Biotin
 - □ Total Biotin by Microbiological Assay
- □ Carnitine
- □ Choline
- □ Choline Ion
- □ Folates
 - Folic Acid
 - □ 5-Methyltetrahydrofolate
 - □ Total Folate by Microbiological Assay
- □ Myo-inositol
- □ Riboflavin (Vitamin B₂)
- □ Thiamine/Thiamine Hydrochloride (Vitamin B₁)
- \Box Vitamin B₃
 - 🗆 Niacin
 - □ Niacinamide
 - □ Total Vitamin B₃
 - □ Total Vitamin B₃ by Microbiological Assay

- \Box Vitamin B₅
 - \Box Pantothenic Acid
 - □ Total Vitamin B₅ by Microbiological Assay
- \Box Vitamin B₆
 - □ Pyridoxal/Pyridoxal Hydrochloride
 - Pyridoxamine/Pyridoxamine Dihydrochloride
 - □ Pyridoxine/Pyridoxine Hydrochloride
 - \Box Total Vitamin B₆
 - □ Total Vitamin B₆ by Microbiological Assay
- \Box Vitamin B₁₂
 - □ Cyanocobalamin
 - □ Total Vitamin B₁₂ by Microbiological Assay

| d. | For which of the following fat-soluble vitamins has your laboratory used < <u>SRM 1849a</u> | | | | | | |
|----|-------------------------------------------------------------------------------------------------|-------------------------------------------------------|--|--|--|--|--|
| | Infant/Adult Nutritional Formula>? This is an all-inclusive list. Some may be removed if | | | | | | |
| | there are no assigned values in the SRM bein | ng queried. | | | | | |
| | Vitamin A | □ Vitamin E | | | | | |
| | □ Retinol | \Box α -Tocopherol | | | | | |
| | Retinyl Palmitate | \Box α -Tocopheryl Acetate | | | | | |
| | Vitamin D | Total α-Tocopherol | | | | | |
| | □ Cholecalciferol (Vitamin D ₃) | \Box β -Tocopherol | | | | | |
| | □ Ergocalciferol (Vitamin D ₂) | γ-Tocopherol | | | | | |
| | Phylloquinone (Vitamin K) | \Box γ- + β-Tocopherol | | | | | |
| | | \Box δ -Tocopherol | | | | | |
| | | | | | | | |
| e. | For which of the following carotenoids has your laboratory used < <u>SRM 1849a Infant/Adult</u> | | | | | | |
| | Nutritional Formula>? This is an all-inclusive list. Some may be removed if there are no | | | | | | |
| _ | assigned values in the SRM being queried. | | | | | | |
| | α-Carotene | □ Total Lutein | | | | | |
| | β-Carotene | □ Lycopene | | | | | |
| | \Box Total β -Carotene | □ <i>trans</i> -Lycopene | | | | | |
| | \Box <i>trans</i> - β -Carotene | □ Total Lycopene | | | | | |
| _ | 9- <i>cis</i> -β-Carotene | □ Total Zeaxanthin | | | | | |
| | Total β-cryptoxanthin | | | | | | |
| c | | l-h | | | | | |
| f. | our laboratory used <srm 1849a="" adult<="" infant="" td=""></srm> | | | | | | |
| | Nutritional Formula>? This is an all-inclusiv | ve list. Some may be removed if there are no | | | | | |
| | assigned values in the SRM being queried. Ash | Diotory Eibor | | | | | |
| | Calories | Dietary Fiber Insoluble | | | | | |
| | Carbohydrates | Insoluble + High Molecular Weight | | | | | |
| | Fat | Soluble | | | | | |
| | Total Fat (sum of fatty acids) | Low Molecular Weight Soluble | | | | | |
| | □ Total Fat (sum of faity acids) | ☐ High Molecular Weight Soluble | | | | | |
| | Moisture | □ High Molecular Weight Total | | | | | |
| | Solids | \square Soluble | | | | | |
| | Sonds | | | | | | |
| | | | | | | | |

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- g. For which of the following fatty acids has your laboratory used <SRM 1849a Infant/Adult Nutritional Formula>? This is an all-inclusive list. Some may be removed if there are no assigned values in the SRM being queried.
- \Box Butryic Acid (C4:0)
- \Box Caproic Acid (C6:0)
- \Box Caprylic Acid (C8:0)
- \Box Capric Acid (C10:0)
- □ Undecanoic Acid (C11:0)
- \Box Lauric Acid (C12:0)
- □ Tridecanoic Acid (C13:0)
- □ Myristic Acid (C14:0)
- □ Myristoleic Acid (C14:1 n-5)
- □ Pentadecanoic Acid (C15:0)
- □ Palmitic Acid (C16:0)
- □ Palmitoleic Acid (C16:1 n-7)
- □ *trans*-Palmitelaidic Acid (C16:1-9t)
- □ Hexadecadienoic Acid (C16:2)
- □ Margaric Acid (C17:0)
- □ Margaroleic Acid (C17:1 n-6)
- □ Stearic Acid (C18:0)
- □ Vaccenic Acid (C18:1 n-7)
- □ Oleic Acid (C18:1 n-9)
- □ *trans*-Vaccenic Acid (C18:1-11t)
- □ Elaidic Acid (C18:1-9t)
- \Box Linoelaidic Acid (C18:2)
- □ 9,12-Octadecadienoic Acid (C18:2-9t)
- □ 9,12-Octadecadienoic Acid (C18:2-12t)
- □ Linoleic Acid (C18:2 n-6)
- \Box α -Linolenic Acid (C18:3 n-3)
- \Box γ -Linolenic Acid (C18:3 n-6)
- □ Stearidonic Acid (C18:4)
- \Box Arachidic Acid (C20:0)

- □ Gadoleic Acid (C20:1 n-7)
- □ Gondoic Acid (C20:1 n-9)
- □ Eicosadienoic Acid (C20:2 n-6)
- Dihomo-γ-linolenic Acid (C20:3 n-6)
- □ 11,14,17-Eicosatrienoic Acid (C20:3 n-3)
- □ EPA (C20:4 n-3)
- □ Arachidonic Acid (C20:4 n-6)
- □ Heneicosanoic Acid (C21:0)
- \Box Behenic Acid (C22:0)
- \Box Erucic Acid (C22:1 n-9)
- □ 13,16-Docosadienoic Acid (C22:2)
- □ DPA (C22:5 n-3)
- □ DHA (C22:6 n-3)
- □ Lignoceric Acid (C24:0)
- □ Nervonic Acid (C24:1 n-9)
- □ *cis*-Monounsaturated Fat
- □ *cis*-Polyunsaturated Fat
- □ Saturated Fat
- □ Total *cis*-C18:1
- □ Total *cis*-C18:2
- □ Total *cis*-C20:1
- □ Total *cis*-C22:4
- □ Total *cis*-C22:5
- □ Total *trans* Fat
- □ Total *trans*-C18:1
- □ Total *trans*-C18:2
- □ Total *trans*-C18:2 Conjugated
- \Box Total ω -3 Fatty Acids
- \Box Total ω -6 Fatty Acids

| | Alanine | | Hydroxyproline | | Proline | | |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--|---------------------------------|------|----------------------------|--|--|
| | Arginine | | Isoleucine | | Serine | | |
| | Aspartic Acid | | L-theanine | | Taurine | | |
| | Cystine | | Leucine | | Threonine | | |
| | Glutamic Acid | | Lysine | | Tryptophan | | |
| | Glycine | | Methionine | | Tyrosine | | |
| | Histidine | | Phenylalanine | | Valine | | |
| | | | 5 | | | | |
| i. | For which of the following sugars has your laboratory used <srm 1849a="" adult<="" infant="" td=""></srm> | | | | | | |
| Nutritional Formula>? This is an all-inclusive list. Some may be removed if there a | | | | | | | |
| | assigned values in the SRM being queried. | | | | | | |
| | Fructose | | Lactose | | Sucrose | | |
| | Glucose | | Maltose | | Total Sugars | | |
| | | | | | | | |
| j. | . For which of the following other analytes has your laboratory used < <u>SRM 1849a</u> | | | | | | |
| | | | a>? This is an all-inclusive li | ist. | Some may be removed if | | |
| | there are no assigned values in the SRM being queried. | | | | | | |
| | Anions | | □ Glycitein | | Phytosterols | | |
| | □ Phosphate | | □ Glycitin | | □ Campesterol | | |
| | □ Sulfate | | Flavonoid Aglycones | | \Box β -Sitosterol | | |
| | Catechins | | □ Quercetin | | □ Stigmasterol | | |
| | □ Catechin | | □ Kaempferol | | □ Cycloartenol | | |
| | □ Catechin Monomers | | □ Isorhamnetin | | □ Brassicasterol | | |
| | Epicatechin | | 🗆 Total | | □ Lupeol | | |
| | Epicatechin Gallate | | Naphthodianthrones | | Xanthines | | |
| | Epigallocatechin | | □ Hypericin | | □ Caffeine | | |
| | Epigallocatechin | | □ Pseudohypericin | | □ Theobromine | | |
| | Gallate | | Organic Acids | | □ Theophylline | | |
| | □ Gallocatechin Gallate | | □ Ascorbic Acid | | □ L-theanine | | |
| | □ Gallic Acid | | □ Citric Acid | | Terpene Lactones | | |
| | □ Gallocatechin | | □ Galacturonic Acid | | ☐ Ginkgolide A | | |
| | Epigallocatechin | | □ Glycolic Acid | | □ Ginkgolide B | | |
| | Methylgallate | | □ Isocitric Acid | | □ Ginkgolide C | | |
| | Cholesterol | | □ Malic Acid | | □ Ginkgolide J | | |
| | Isoflavones | | □ Oxalic Acid | | □ Bilobalide | | |
| | □ Daidzein | | Quinic Acid | | Total Antioxidant Capacity | | |
| | □ Daidzin | | □ Shikimic Acid | | Total Polyphenols | | |
| | □ Genistein | | □ Tartaric Acid | | Total Procyanidins | | |

h. For which of the following amino acids has your laboratory used <SRM 1849a Infant/Adult Nutritional Formula>? This is an all-inclusive list. Some may be removed if there are no

assigned values in the SRM being queried.

□ Genistin

2. Please list any other analytes or analyte groups that would be beneficial to have assigned in <<u>SRM 1849a Infant/Adult Nutritional Formula</u>>. Click here to enter text.

- 3. Please describe other ways that <SRM 1849a Infant/Adult Nutritional Formula> could better suit your needs. Click here to enter text.
- 4. Please describe other ways that <SRM 1849a Infant/Adult Nutritional Formula> could better suit your needs. Click here to enter text.

The coordinators of the NIST Food and Nutrition Reference Materials Program thank you for your participation in this questionnaire.

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