

**In Brief**

Ottawa, February 12, 1998

**SUBJECT**

**NAFTA HARMONIZED  
LABORATORY METHODS**

1. The attached Appendix A to Memorandum D11-12-1 replaces Appendix A to the same Memorandum dated November 12, 1996. The new Appendix contains seven additional NAFTA Harmonized Laboratory Methods.
2. Four of these new methods, designated by the abbreviation "NHM," were developed by one of the three NAFTA countries and agreed to by all NAFTA countries. Three methods from the American Society for Testing and Materials (ASTM) have also been added to the Appendix. The other changes are the addition of the word "Standard" to the beginning of the title for each ASTM method.

**MEMORANDUM D11-12-1**

LOCATOR NUMBER: 772A

Ottawa, November 12, 1996

**SUBJECT****NAFTA HARMONIZED  
LABORATORY METHODS**

This Memorandum lists the laboratory methods which have been jointly accepted by the customs laboratories of Canada, Mexico, and the United States to achieve inter-laboratory consistency in the analysis of goods for customs purposes. Additional methods will be added to the list as agreement is reached by the laboratories of the three countries.

**TABLE OF CONTENTS**

	<b>Page</b>
<b>Guidelines and General Information</b>	1
Appendix A – NAFTA Harmonized Laboratory Methods	
Appendix B – Abbreviations, titles, and addresses of Standards Organizations	

---

**GUIDELINES AND  
GENERAL INFORMATION**

1. Article 906 of the North American Free Trade Agreement (NAFTA) requires the Parties to the Agreement, to the greatest extent possible, to make compatible their standards-related measures, so as to facilitate trade, and to promote the compatibility of a specific standard or conformity assessment procedure.
2. In 1993, the Heads of Customs Conference established the NAFTA Laboratory Working Group (LWG) to achieve greater technical co-operation and harmonization. One of the primary tasks of the LWG is to establish harmonized laboratory methods for analytical determinations made in the customs laboratories of the three countries.
3. The methods listed in Appendix A have been accepted by the customs laboratories of Canada, Mexico, and the United States for the purpose of determining the physical properties and chemical composition of goods required for classification within the Harmonized System and for other customs purposes.
4. For convenience of access, methods are listed according to the principal area(s) of application in relation to the chapters or headings of the Harmonized System.
5. This list does not prohibit the use of semi-quantitative or other methods. However when results are close to a critical value or when results are under dispute, the Harmonized methods should be used for the final determination.
6. The use of these methods for customs purposes by private or commercial laboratories does not constitute an accreditation of those laboratories or a guarantee of the validity of the results obtained. The accuracy of results is dependent upon the individual laboratory's ability to properly apply a particular

method to goods within the scope of that method. Revenue Canada reserves the right to request samples to verify that the reported results are valid for the product and purpose intended.

7. Methods published by standards organizations may be purchased directly from the publishing organization.

8. Methods identified by the Method No. prefix "NHM" are available from:

Laboratory and Scientific Services Directorate (LSSD)  
Revenue Canada  
79 Bentley Avenue  
Ottawa ON K1A 0L5

9. Inquiries should be addressed to:

K. Forgues, Director  
Customs Laboratory Division  
Laboratory and Scientific Services Directorate  
Revenue Canada  
79 Bentley Avenue  
Ottawa ON K1A 0L5

---

## APPENDIX A

### NAFTA HARMONIZED LABORATORY METHODS MÉTHODES DE LABORATOIRE HARMONISÉES DE L'ALENA

REFERENCES RÉFÉRENCES	METHOD NO. – DATE N° DE LA MÉTHODE – DATE	METHOD TITLE TITRE DE LA MÉTHODE*	REMARKS OBSERVATIONS
Chapters / Chapitres 25, 26, 28, and / et 32	ASTM D 50 – 1994	Standard Test Methods for Chemical Analysis of Yellow, Orange, Red, and Brown Pigments Containing Iron and Manganese	
Chapters / Chapitres 28 and / et 74	ASTM E 1371 – 1994	Standard Test Method for the Gravimetric Determination of Phosphorus in Phosphorus-Copper Alloys or Phosphorus-Copper-Silver Alloys	
Chapters / Chapitres 25 and / et 38	ASTM C 561 – 1991	Standard Test Method for Ash in a Graphite Sample	
Chapters / Chapitres 25 and / et 38	ASTM D 2488 – 1993	Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)	
Chapters / Chapitres 32 and / et 39	ASTM D 1259 – 1994	Standard Test Methods for Nonvolatile Content of Resin Solutions	
Chapter / Chapitre 34 Note 2	AOAC-IUPAC 963.22 – 1990	Methyl Esters of Fatty Acids in Oils and Fats – Gas Chromatographic Method	Fatty acids content in soaps – Method modified for use of capillary columns instead of packed ones / Teneur en acides gras des savons – Méthode modifiée en vue de l'utilisation de colonnes capillaires au lieu de colonnes garnies
Chapter / Chapitre 34 Note 3, Heading / Position 34.04	ASTM D 1331 – 1995	Standard Test Methods for Surface and Interfacial Tension of Solutions of Surface-Active Agents	<b>Note:</b> alternative procedure for preparing 0.5% test solutions <b>Nota :</b> autre méthode de préparation des solutions à 0,5 %
Chapter / Chapitre 34	ASTM D 2669 – 1993	Standard Test Method for	

REFERENCES RÉFÉRENCES	METHOD NO. – DATE Nº DE LA MÉTHODE – DATE	METHOD TITLE TITRE DE LA MÉTHODE*	REMARKS OBSERVATIONS
Note 5, Heading / Position 34.04		Apparent Viscosity of Petroleum Waxes Compounded with Additives (Hot Melts)	
Chapter / Chapitre 34 Note 5, Heading / Position 34.04	ASTM D 3954 – 1994	Standard Test Methods for Dropping Point of Waxes	
Chapter / Chapitre 39 Heading / Position 39.01	ASTM D 792 – 1991	Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement	
Chapters / Chapitres 50-60	ASTM D 2260 – 1995	Standard Tables of Conversion Factors and Equivalent Yarn Numbers Measured in Various Numbering Systems	
Chapters / Chapitres 50-60	ISO 2947 – 1973	Textiles – Integrated conversion table for replacing traditional yarn numbers by rounded values in the Tex System	
Chapters / Chapitres 50-60	ISO 139 – 1973	Textiles – Standard atmospheres for conditioning and testing	
Chapters / Chapitres 50-60	ASTM D 1776 – 1990	Standard Practice for Conditioning Textiles for Testing	
Chapters / Chapitres 50-60	ISO 5089 – 1977	Textiles – Preparation of laboratory test samples and test specimens for chemical testing	
Chapters / Chapitres 50-60	ISO/TR 5090 – 1977	Textiles – Methods for the removal of non-fibrous matter prior to quantitative analysis of fibre mixtures	
Chapters / Chapitres 50-60	NHM 001 – 1997	Screening method for the identification of fibres by a flame test	
Chapters / Chapitres 50-60	NHM 002 – 1997	Man-made fibres – Identification by infrared spectroscopy	
Chapters / Chapitres 50-60	ISO 1833 – 1977	Textiles – Binary fibre mixtures – Quantitative chemical analysis	
Chapters / Chapitres 50-60	ISO 5088 – 1976	Textiles – Ternary fibre mixtures – Quantitative	

REFERENCES RÉFÉRENCES	METHOD NO. – DATE N° DE LA MÉTHODE – DATE	METHOD TITLE TITRE DE LA MÉTHODE*	REMARKS OBSERVATIONS
		analysis	
Chapters / Chapitres 50-60	ASTM D 629 – 1995	Standard Test Methods for Quantitative Analysis of Textiles	
Chapters / Chapitres 50-60	AATCC 20 – 1990	Fiber Analysis: Qualitative	
Chapters / Chapitres 50-60	AATCC 20A – 1990	Fiber Analysis: Quantitative	
Chapter / Chapitre 51	ASTM D 584 – 1994	Standard Test Method for Wool Content of Raw Wool – Laboratory Scale	
Chapter / Chapitre 51	ISO 3072 – 1975	Wool – Determination of solubility in alkali	
Chapter / Chapitre 51	ASTM D 1574 – 1995	Standard Test Method for Extractable Matter in Wool	US recommends substituting 95% ethanol for trichlorofluoroethylene. / Les É.-U. recommandent le remplacement du trichlorofluoroéthylène par de l'éthanol à 95 %.
Chapter / Chapitre 51	ASTM D 1113 – 1995	Standard Test Method for Vegetable Matter and Other Alkali-Insoluble Impurities in Scoured Wool	
Chapter / Chapitre 51	ASTM D 3991 – 1994	Standard Specifications for Fineness of Wool or Mohair and Assignment of Grade	
Chapter / Chapitre 51	ISO 137 – 1975	Wool – Determination of fibre diameter – Projection microscope method	
Chapter / Chapitre 51	ASTM D 2130 – 1995	Standard Test Method for Diameter of Wool and Other Animal Fibres by Microprecision	
Chapters / Chapitres 50-56	ISO 1144 – 1973	Textiles – Universal system for designating linear density (Tex System)	
Chapters / Chapitres 50-56	ASTM D 2497 – 1995	Standard Tolerance for Man-Made, Organic-Base Filament Single Yarns	

REFERENCES RÉFÉRENCES	METHOD NO. – DATE N° DE LA MÉTHODE – DATE	METHOD TITLE TITRE DE LA MÉTHODE*	REMARKS OBSERVATIONS
Chapters / Chapitres 50-56	ASTM D 861 – 1995	Standard Practice for Use of the Tex System to Designate Linear Density of Fibers, Yarn Intermediates and Yarns	
Chapters / Chapitres 50-56	ISO 1973 – 1976	Textiles – Determination of linear density of fibres – Gravimetric method	
Chapters / Chapitres 50-56	ISO 2060 – 1994	Textiles – Yarn from packages – Determination of linear density (mass per unit length) by the Skein method,	
Chapters / Chapitres 50-56	ASTM D 1907 – 1989	Standard Test Method for Yarn Number by the Skein Method	
Chapters / Chapitres 50-56	ASTM D 1059 – 1992	Standard Test Method for Yarn Number Based on Short Length Specimens	
Chapters / Chapitres 52, 54, and / et 55	ISO 2 – 1973	Textiles – Designation of the direction of twist in yarns and related products	
Chapters / Chapitres 52, 54, and / et 55	ISO 2061 – 1972	Textiles – Determination of twist in yarns – Direct counting method	
Chapters / Chapitres 52, 54, and / et 55	ASTM D 1423 – 1992	Standard Test Method for Twist in Yarns by the Direct Counting Method	
Chapters / Chapitres 50-56	ISO 2062 – 1993	Textiles – Yarn from packages – Determination of single-end breaking force and elongation at break	
Chapters / Chapitres 50-56	ISO 5079 – 1977	Textiles – Man-made fibres – Determination of breaking strength and elongation of individual fibres	
Chapters / Chapitres 50-56	ASTM D 3822 – 1995	Standard Test Method for Tensile Properties of Single Textile Fibres	
Chapters / Chapitres 50-56	ASTM D 2101 – 1995	Standard Test Method for Tensile Properties of Single Man-Made Textile Fibres Taken from Yarns and	

REFERENCES RÉFÉRENCES	METHOD NO. – DATE Nº DE LA MÉTHODE – DATE	METHOD TITLE TITRE DE LA MÉTHODE*	REMARKS OBSERVATIONS
		Tows	
Chapters / Chapitres 50-56	ASTM D 2256 – 1995	Standard Test Method for Tensile Properties of Yarns by the Single-Strand Method	
Chapter / Chapitre 54	ISO 7211-5 – 1984	Textiles – Woven fabrics – Construction – Methods of analysis – Part 5: Determination of linear density of yarn removed from fabric	
Chapters / Chapitres 50-60	ISO 3932 – 1976	Textiles – Woven fabrics – Measurement of width of pieces	
Chapters / Chapitres 50-60	ASTM D 3774 – 1989	Standard Test Methods for Width of Woven Fabric	
Chapters / Chapitres 50-60	ISO 3933 – 1976	Textiles – Woven fabrics – Measurement of length in pieces	
Chapters / Chapitres 50-60	ISO 3801 – 1977	Textiles – Woven fabrics – Determination of mass per unit length and mass per unit area	
Chapters / Chapitres 50-60	ASTM D 3776 – 1990	Standard Test Method for Mass per Unit Area (Weight) of Woven Fabric	
Chapters / Chapitres 50-55	ISO 7211-2 – 1984	Textiles – Woven fabrics – Construction – Methods of analysis – Part 2: Determination of number of threads per unit length	
Chapters / Chapitres 50-55	ISO 7211-6 – 1984	Textiles – Woven fabrics – Construction – Methods of analysis – Part 6: Determination of the mass of warp and weft per unit area of fabric	
Chapters / Chapitres 50-55	NHM 004 – 1997	Weave type determination for Section XI of the Harmonized System	
Chapters / Chapitres 50-55	ASTM D 3775 – 1990	Standard Test Method for Fabric Count of Woven Fabric	
Chapters / Chapitres	ISO 7211-1 – 1984	Textiles – Woven fabrics –	

REFERENCES RÉFÉRENCES	METHOD NO. – DATE Nº DE LA MÉTHODE – DATE	METHOD TITLE TITRE DE LA MÉTHODE*	REMARKS OBSERVATIONS
50-55		Construction – Methods of analysis – Part 1: Methods for the presentation of a weave diagram and plans for drafting, denting and lifting	
Chapter / Chapitre 56 Heading / Position 56.01	ISO 6989 – 1981	Textile Fibres – Determination of length and length distribution of staple fibres (by measurement of single fibres)	
Chapter / Chapitre 56	ISO 9073-1 – 1989	Textiles – Test methods for nonwovens – Part 1: Determination of mass per unit area	
Chapter / Chapitre 56	ISO 9073-2	Textiles – Test methods for nonwovens – Part 2: Determination of thickness	
Chapters / Chapitres 56 and / et 59	NHM 003 – 1997	Coatings and impregnations on fabrics – Identification by infrared spectroscopy	
Chapter / Chapitre 56	ISO 5080 – 1994	Sisal agricultural twines	
Chapter / Chapitre 56 Subheading / Sous-position 5607.41	ISO 4167 – 1979	Ropes and cordage – Polyolefin agricultural twines	
Chapter / Chapitre 56	ASTM D 1233 – 1993	Standard Specification for Twine Made for Bast and Leaf Fibres	
Chapter / Chapitre 57	ISO 2550 – 1972	Textile Floor Coverings – Hand-made carpets – Determination of types of knots	
Chapter / Chapitre 69,	ASTM C 373 – 1994	Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products	

\*Titles exist only in English. / Ces titres existent en anglais seulement.

## **APPENDIX B**

### **ABBREVIATIONS, TITLES, AND ADDRESSES OF STANDARDS ORGANIZATIONS**

**ISO** International Organization for Standardization  
Geneva, Switzerland

Standards can be obtained in Canada from:

Standards Council of Canada  
Suite 1200  
45 O'Connor Street  
Ottawa ON K1P 6N7

Telephone: (613) 238-3222  
Fax: (613) 995-4564

**ASTM** American Society for Testing and Materials  
100 Barr Harbor Drive  
West Conshohocken, PA  
19428-2959

Telephone: (610) 832-9585  
Fax: (610) 832-9555

**AATCC** American Association of Textile Chemists and Colorists  
P.O. Box 12215  
Research Triangle Park, N.C.  
27709

Telephone: (919) 549-8141  
Fax: (919) 549-8933

**IUPAC** International Union of Pure and Applied Chemistry

Publications can be purchased from:

Elsevier Science  
Customer Service Department  
P.O. Box 945  
New York, N.Y.  
10159-0945

Telephone: (212) 633-3750  
Fax: (212) 633-3764

**AOAC** AOAC International  
1970 Chain Bridge Road  
Dept. 0742  
McLean, VA  
22109-0742

Telephone: 1-800-379-2622  
Fax: (703) 522-5468

## **REFERENCES**

### **ISSUING OFFICE –**

Laboratory and Scientific Services Directorate

### **LEGISLATIVE REFERENCES –**

North American Free Trade Agreement, Article 906

### **HEADQUARTERS FILE –**

N/A

### **SUPERSEDED MEMORANDA “D”–**

N/A

### **OTHER REFERENCES –**

N/A