Guidelines for Writing an ASTA Method

Approved July 10, 2012

ASTA Methods are designed to be performed in industry, as well as commercial laboratories. Because many of the methods are used to help, spice manufacturers meet specifications, as well as to aid in the trade of goods; it is essential that the directions are uniformly interpreted by all parties involved.

The ASTA style has evolved over many years and now includes a standardized format, as well as standardized abbreviations, definitions, terminology and style.

The language of the method should be completely free from ambiguity and the length should be as long as required to properly communicate the detail of the method to the analyst. Whenever there is a conflict between clarity and style, clarity is more important.

When new or revised methods are approved, old methods will be archived in the ASTA electronic records with any supporting documents or reports that are generated to justify the merits or practices of the approved method. All records shall include accurate dates of issue, revision and approval. New and revised methods shall be announced through the ASTA Web site and electronic mailings to the general membership.

Format: The format style is attached and was designed for continuity and completeness.

Method Number: If it is a completely new method a new number is issued, if it is a revision of an existing method or analyzes the same analyte, the number to the right of the decimal point is increased by 1.

Method Title: Should state the analyte being determined in terms of its common name and indicate the commodities to which the method is applicable.

Purpose: In one or two sentences explain the reason for this method.

Principle: Briefly summarize the methodology and equipment used in the assay.

Apparatus: Because not all spice labs are completely equipped, even ordinary apparatus, such as beakers, flasks, funnels, etc should be listed. When listing apparatus give specific brand names, but always allow “or equal” where appropriate.

Reagents: List all reagents, which are required. While it is appropriate to give grades, reagents without specifications are automatically reagent grade, conforming to the specifications of the American Chemical Society (ACS) when such specifications exist. For materials requiring directions for preparation, purification, or standardization, give details. Standard compounds will need specifications or a source of supply.

Preparation of Sample: Where appropriate cite an existing ASTA Sample Preparation Method. If this is not appropriate then give sufficient detail for preparing the sample for analysis.

Procedure: If a method is fairly straight forward, and it consists of only a single major step, describe all operations under this heading. If the method is complex, divide the determination section into several parts, which may be characterized by the type of operation performed. Be sure to identify all Critical Control Points.

Calculations: Include calculations in the method for convenience to avoid the need for looking up factors and deriving equations, particularly when a series of multiple dilutions or aliquots are used at various steps in the method. Take particular care to ensure that there is no ambiguity with regard to the entries in the numerator or the denominator. Where appropriate, give an example of the calculations.

Statistics: Where appropriate, give this data for the analyst to better understand the precision and accuracy of this method.

Notes: All Footnotes to the above method are presented here.

References: If this method has been copied or modified from a standard compendium of methods, please give the appropriate reference.

Revision History: This section lists changes made to successive methods, the date of the changes and reference to any documents that justify the changes.

Abbreviations: See last page for acceptable abbreviations

To use this template for writing a new method, delete pages 1, 2, and 4 and begin writing.

Method Title

Purpose:

Principle:

A. Apparatus

1. (numbered list of equipment)

B. Reagents

1. (numbered list of reagents)

C. Preparation of Sample

1. (numbered list of steps)

D. Procedure

1. (numbered list of steps)

E. Calculation

F. Statistics

G. Notes

1. (numbered list of notes)

H. References

1. (numbered list of references)

I. Revision History

Date and indented description of changes

SCIENTIFIC ABBREVIATIONS

A	Absorbance (Extinction)	mm	Millimeter
AA	Atomic Absorption	mp	Melting Point
AOAC	Association of Official Analytical Chemists	MPN	Most Probable Number
Approx	Approximate(ly)	mμ	Millimicron
B	Bacillus	n	Index of Refraction
Be`	Baume`	NF	National Formulary
Bp	Boiling Point	ng	Nanogram (10^{-9} g)
C	Celsius (Centigrade) Degrees	nm	Nanometer (10^{-9} m)
Ca	Approximately, About	NTU	Nephelometric Turbidity Units
CFU	Colony Forming Units	oz	Ounce
Ci	Curie	pCi	PicoCuries (10^{-12} ci)
cm	Centimeter (10^{-2} m)	pH	Acid Base Scale
d	Density	ppb	Parts per Billion (10^{-9})
deg	Degree	ppm	Parts per Million (10^{-6})
eq	Equivalent	psi	Pounds per Square Inch
F	Fahrenheit Degrees	pt	Pint
fl oz	Fluid Ounce	qt	Quart
g	Gram(s)	rpm	Revolutions per Minute
gal	Gallon(s)	sec	Seconds
GC	Gas Chromatography	SHU	Scoville Heat Units
GLC	Gas Liquid Chromatography	sp gr	Specific Gravity
g/l	Grams per Liter	T	Transmittance
HPLC	High Performance Liquid Chromatography	tbsp	Tablespoon
Hr	Hour	TLC	Thin Layer Chromatography
IR	Infrared	tsp	Teaspoon
IU	International Units	μm	Micrometer (10^{-6} M)
Kg	Kilogram	USP	United States Pharmacopoeia
L	Liter	UV	Ultraviolet
Lb	Pound(s)	vis	Visible
LC	Liquid Chromatography	w/v	(Percent) "Weight in Volume"
Mcg	Microgram (10^{-6} g) (μg)	w/w	(Percent) "Weight in Weight"
Meq	Milliequivalent	/	Per
Mg	Milligram (10^{-3} g)	<	Less Than
Min	Minute(s)	>	More Than
ml	Milliter	~	Approximately Equal To