

# Macroanalytical Procedures Manual (MPM)

## MPM: V-8. Spices, Condiments, Flavors, and Crude Drugs

### B. Supplemental Method for Black and White Pepper (V-39)

Version 1 - May 1998

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## B. Supplemental Method for Black and White Pepper (V-39)

### (1) Scope

This method supplements and/or replaces those procedures in [Section 8.A.](#), by describing procedures specific to black and white pepper (*Piper nigrum* L.). The term "siftings and pickings" is used to describe certain objectionable matter which may be present in black and white pepper. When examining black or white pepper, the procedure for "siftings and pickings" described below may be used in lieu of Procedure (4), [Section 8.A.](#)

### (2) Applicable Documents

- [CPG 7109.17 Defect Action Levels](#)

### (3) Procedure: Determination of "Siftings and Pickings" and Animal Contamination in Pepper Berries

**a. *Special Apparatus*** -- This procedure calls for use of a standard pepper sieve. The sieve consists of a No. 9-1/2 round screen with a frame 18 to 22 in. in diameter and 2-3/4 in. in height. The bottom is a metal sheet perforated with round holes 7/64 in. in diameter with an average of 5-1/2 holes per linear inch (small or "office" size 8-9 in. in diameter). U.S. Standard No. 8 sieves (0.0937 in. or 2.38 square mm opening) provide equivalent sieve opening. A perforated sieve, but not the finished unit, may be obtained in the U.S.A. from Beckley Perforating Company, 315 North Avenue, Garwood, NJ 07027, or from McNichols Company, 5501 gray Street, Tampa, FL 33609.

**b. *Siftings*** -- Combine aliquots from each subsample to give a composite sample of approximately 4 kg, unless product lot variability indicates analysis of individual subsamples. Weigh composite sample and divide into approximately two equal portions. Screen each portion separately, using the standard pepper sieve (when using the small or "office" sieve, screen only 400 to 500 g at a time) or the U.S. No. 8 equivalent. Obtain the siftings by tilting the sieve from side to side so that the pepper passes from one side of the sieve to the opposite side 10 times. Weigh siftings after removal of pinheads/light berries. Examine siftings; identify, describe, and quantify, as necessary.

**c. *Pickings*** -- After sifting, hand-pick sample ("overs" on the sieve) for foreign material such as sticks, stones, stems, clay, foreign seeds, and other extraneous matter. Weigh pickings other than animal contamination (3)d.â identify, describe, and quantify, as necessary.

**d. Animal Contamination** -- Report contamination other than insect excreta separately from siftings and pickings. Examine siftings and pickings for animal contamination, such as mammalian excreta, bird excreta, and whole insects or equivalent. If appropriate, examine a separate analytical sample of approximately 500 g. Classify, weigh, and report as in (3)e.

**e. Report** -- Tabulate results as follows, adding additional categories as necessary:

	Subsample No. 1	Subsample No. 2	Subsample No. 3	etc.
Weight Examined (g)				
Mammalian Excreta (mg/lb)				
Whole Insects or Equivalent <sup>a</sup>				
Siftings and Pickings (percent by wt)				
Other <sup>b</sup>				
Remarks:				

Notes:

a Describe in [Section 8.A.\(4\)a\(i\)](#); report under Remarks

b Substitute appropriate headings(s) such as bird excreta, etc.

#### (4) Procedure: Determination of Insect-Damaged, Moldy and Otherwise Reject Pepper Berries

Follow Procedure (5) in [Section 8.A.](#) for detection of pepper berries with external defects. Examine representative sample of 200 or more berries. Cut open any suspect berries as necessary. Examine, classify, and report as in [8.A\(5\)b, c, and d.](#)

## References

(1) American Spice Trade Assn. Inc., *Cleanliness Specifications for Unprocessed Spices, Seeds and Herbs*, ASTA, 580 Sylvan Ave., Englewood Cliffs, NJ 07632, Jan. 1983.

(2) ASTA, *Official Analytical Methods of ASTA*, 2nd Ed., 1968.

(3) Parry, J. W., *Spices - Their Morphology, Histology, and Chemistry*, Chemical Publishing Co., Inc., New York, NY, 1962.

(4) White, Ralph T., "Studies on the Storage and Shipment of Whole Black Pepper Grown in the Orient," *J. Econ. Entomol.* 50: 423-428, 1957.

# Revision History

<b>Version No.</b>	<b>Purpose of change</b>	<b>Date</b>
V0	New process	1984
V1	Electronic Version	1998