

## ASTA's Cleanliness specifications for Spices, Seeds and Herbs

(Effective April 28, 1999)

For purpose of these Specifications, extraneous matter is defined as everything foreign to the product itself and included, but is not restricted to: stones, dirt, wire, string, stems, sticks, nontoxic foreign seeds, excreta, manure and animal contamination.

The level of contaminants permitted under these Specifications must fall below those shown on the following table, except for the column "Whole Insects, Dead" which cannot exceed the limits shown.

	Whole insects dead	Excreta Mammalian	Excreta other	Mold	Insect defiled/infested	Extraneous foreign matter
Name of spice, seed or herb	By count	By mg./lb	By mg./lb	% by Wgt.	% by wgt.	% by wgt.
<b>All spice</b>	2	5	5.0	2.00	1.00	0.50
<b>Anise</b>	4	3	5.0	1.00	1.00	1.00
<b>Sweet Basil</b>	2	1	2.0	1.00	1.00	0.50n
<b>Caraway</b>	4	3	10.0	1.00	1.00	0.50
<b>Cardamom</b>	4	3	1.0	1.00	1.00	0.50
<b>Cassia</b>	2	1	1.0	5.00	2.50	0.50
<b>Cinnamon</b>	2	1	2.0	1.00	1.0	0.50
<b>Celery Seed</b>	4	3	3.0	1.00	1.0	0.50
<b>Chillies</b>	4	1	8.0	3.00	2.50	0.50
<b>Cloves</b>	4	5	8.0	1.00	1.00	1.00 *
<b>Coriander</b>	4	3	10.0	1.00	1.00	0.50
<b>Cumin Seed</b>	4	3	5.0	1.00	1.00	0.50
<b>Dill Seed</b>	4	3	2.0	1.00	1.00	0.50
<b>Fennel Seed</b>	SF(2)	SF(2)	SF(2)	1.00	1.00	0.50
<b>Ginger</b>	4	3	3.0	SF(3)	SF(3)	1.00
<b>Laurel Leaves **</b>	2	1	10.0	2.00	2.50	0.50
<b>Mace</b>	4	3	1.0	2.00	1.00	0.50
<b>Marjoram</b>	3	1	10.0	1.00	1.00	1.00n
<b>Nutmeg (Broken)</b>	4	5	1.0	SF(4)	SF(4)	0.50
<b>Nutmeg (Whole)</b>	4	0	0.0	SF(5)	SF(5)	0.00
<b>Oregano ***</b>	3	1	10.0	1.00	1.00	1.00n
<b>Black Pepper</b>	2	1	5.0	SF(6)	SF(6)	1.00
<b>White Pepper ****</b>	2	1	1.0	SF(7)	SF(7)	0.50

<b>Poppy Seed</b>	2	3	3.0	1.00	1.00	0.50
<b>Rosemary Leaves</b>	2	1	4.0	1.00	1.00	0.50n
<b>Sage **</b>	2	1	4.0	1.00	1.00	0.50
<b>Savory</b>	2	1	10.0	1.00	1.00	0.50n
<b>Sesame Seed</b>	4	5	10.0	1.00	1.00	0.50
<b>Sesame Seed, Hulled</b>	4	5	1.0	1.00	1.00	0.50n
<b>Tarragon</b>	2	1	1.0	1.00	1.00	0.50n
<b>Thyme</b>	4	1	5.0	1.00	1.00	0.50n
<b>Turmeric</b>	3	5	5.0	3.00	2.50	0.50

**Cleanliness Specifications Footnotes:**

- \* **Clove stems:** Less than (<) 5% allowance by weight for unattached clove stems over and above the tolerance for other Extraneous Matter is permitted
- \*\* **Laurel leaves: Sage:** "Stems" will be reported separately for economic purposes and will not represent a Pass/fail criteria
- \*\*\* **Oregano:** Analysis for presence of Sumac shall not be mandatory, if samples are marked "Product of Mexico"
- \*\*\*\* **White pepper:** "Percent Black Pepper" will be reported separately for economic purposes and will not represent a pass/fail criteria
- (2) **Fennel Seed:** In the case of fennel seed, if more than 20% of the sub samples contain any rodent, other excreta or whole insects, or an average of 3 mg/lb. of mammalian excreta, the lot must be reconditioned
- (3) **Ginger** More than 3% moldy pieces and/or insect infested pieces by weight
- (4) **Broken Nutmeg:** More than 5% mold/insect defiled combined by weight
- (5) **Whole Nutmeg** More than 10% insect infested and/or moldy pieces, with a maximum of 5% insect defiled pieces by count
- (6) **Black Pepper** 1% moldy and/or infested pieces by weight
- (7) **White Pepper** 1% moldy and/or infested pieces by weight
- u **Whole Insects, Dead:** Cannot exceed the limits shown
- n **Extraneous Matter** Include other plant material, e.g. foreign leaves

**Ground Processed Spice \***

(Cannot exceed limit shown)

Spices	Whole Equivalent Insects	Insect Fragments	Mites	Other Insects	Rats/Mouse Hairs	Animal Hairs
Ground Paprika		Avg. of more than 75 fragments/ 25g			Avg. of more than 75 fragments/ 25g	

- Microanalytical Methods for Paprika and Ground Capsicums can be found in the "Analytical Procedures" section of the ASTA Cleanliness Specifications for Spices, Seeds, and Herbs Manual (4/28/99)

**IN ADDITION TO THE PRECEDING SPECIFICATIONS, A LOT MUST ALSO BE RECONDITIONED:**

**A. MAMMALIAN EXCRETA**

If the average of the total number of sub-samples exceeds the listed milligram per pound Specifications.  
*Exception:* In the case of fennel seed, see footnote (2)

**B. OTHER EXCRETA**

If the average weight expressed as milligrams per pound for all subdivisions of the sample exceeds the specified values shown in the table.*Exception:* In the case of fennel seed, see footnote (2)

**NOTE:** The Food and Drug Administration specifies only mammalia excreta, ASTA will count all types of non-mammalian excreta as Other Excreta. FDA retains the right to detain merchandise containing excessive amounts of excreta, which is of non-mammalian origin, on the basis that the merchandise was exposed to unsanitary conditions.

**C. INSECTS**

If the total number of whole dead insects found in the total number of the sub samples exceeds the specified value shown in the table

If live insects are found in the original sample reconditioning is to include fumigating. If the number of live and dead insects exceeds the cleanliness specification for whole dead insects for that spice, then reconditioning must also include sifting and blowing. Thereafter, in accordance with Procedures A. Sampling, new samples shall be drawn, analyzed and a new Certificate of Analysis issued.

**Exception:**

1. In the case of fennel seed, if 20% or more of the sub samples contain any whole insects, the lot must be reconditioned. (For example, if two or more sub samples of a ten-unit sample each contain one whole insect, the lot must be reconditioned)
2. If the number of live insects found in the total number of sub samples is less than the cleanliness specifications for whole insects for that spice; the lot must be fumigated and then re-sampled.
3. If it appears to the unaided eye that 50 or more mites and psocids are present, the lot must be fumigated, sifted, and blown. Mites and/or psocids are not to be counted as insects.

**A. INSECTS**

If mould is present, as expressed by percent by weight of the total quantity of spice in all sub samples, in excess of the specified values shown in the table. A product is classified as moldy if it contains mold, visible to the naked eye, exceeding ¼ of its surface area and confirmed by the presence of mycelial filaments and spores when examined with the aid of a microscope (40 x magnification or less)

**B. INSECTS DEFILED/INFESTED**

If the total sample quantity exceeds the specified values shown in the table expressed as percent by weight of insect infested, bored, or otherwise defiled seeds, leaves or roots. Before reconditioning, a lot is considered defiled whenever a sample shows visible evidence of webbing or definite insect feeding.

**C. RECONDITIONING AND RECONDITIONED ITEMS**

Reconditioning may include, but shall not be limited to, techniques such as fumigating, washing, cutting, sifting, aspirating and blowing.

Insect channels or insect-bored holes in reconditioned spices will not be counted as insect defiled, as they would in the examination of non-reconditioned spices, provided there are no insects, webbing or excreta in those channels or holes.

**D. INSECTS**

If the light berries, though not considered extraneous matter, exceed 4% by weight.