

INTACT BLACK PEPPER





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1.- Intact Black Pepper General Information

The intact black pepper is the black pepper in whole grains that suffered no physical damages, such as squashing. It can be used in salads, marinades, roasts and pickles.

For the perfect conservation of the mass of the black pepper grains, the moisture content must be reduced at levels that: make unfeasible the development of the agents responsible for the degeneration, fungus and bacteria; reduce the breathing rate of the grains; and block the occurrence of enzymatic reactions that would propitiate the self-degeneration of the grains. The dehydration process should begin soon after the harvest. In industry, the second drying will cause more reduction in the moisture level.

The industrialized good-qualified black pepper may be consumed until 18 months after its processing. The black pepper is classified according to its quality. Some quality parameters guide The processing of this product for obtaining a good-qualified pepper are based on some available parameters. The International Pepper Community (IPC) indicates those parameters for two classifications of the whole black pepper: IPC BP-1 and IPC BP-2. They are presented below.

| QUALITY PARAMETER | BLACK PEPPER (Whole) | |
|---|--|----------------|
| | IPC BP-1 | IPC BP-2 |
| MACRO | | |
| 1. Bulk Density (g/l, min.) | 550 | 500 |
| 2. Moisture (% vol/wt, max.) | 12 | 14 |
| 3. Light Berries/Corns (% by wt, max.) | 2 | 10 |
| 4. Extraneous Matter (% by wt, max.) | 1 | 2 |
| 5. Black Berries/Corns (% by wt, max) | Not applicable | Not applicable |
| 6. Mouldy Berries/Corns (% by wt, max.) | 1 | 3 |
| 7. Insect Defiled Berries/Corns (% by wt, max) | 1 | 2 |
| 8. Whole Insects, dead or alive (by count, max) | Not more than 2 numbers in each sub sample and not more than 5 numbers in total sub-samples. | |
| 9. Mammalian or/and Other Excreta | Shall be free of any visible mammalian or/and other excreta. | |
| MICROBIOLOGICAL | | |
| 1. Salmonella (detection / 25g) | Negative | Negative |
| NOTES: | | |
| 1. IPC BP-2 is a grade of pepper, which has been partially processed (i.e. has gone through some basic cleaning processes like sieving and winnowing) | | |
| 2. IPC BP-1 is a grade of pepper, which has been further processed (i.e. has gone through further | | |

2.- Intact Black Pepper Processing details

2.1.-Second Drying

This drying occurs during the black pepper processing in the industrial unit. The first drying occurs soon after the harvest, and it is performed in order to reducing the amount of water in the grains, but not to adjusting the moisture content at optimum level. During their transportation and until undergoing the second drying, the grains can reacquire some moisture. So, the second dehydration process will reduce the moisture content until a preestablished level.

The drying by direct exposure to the sun is still practiced in large scale. However, its is limited to regions with hot and dry climate and high insolation.

In the indirect system, the heat is transmitted to the grains through the hot air that circulates tangentially to the product by a horizontal or transverse flow. The time and the drying temperature depend on the air relative humidity, air speed inside the cabin, and the characteristics of the equipment. For small and medium enterprises, the cabinet and continuous belt dryers are most suitable, but the first ones are less expensive.

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2.2.- Weighting

After dehydration, the weighting and the calculation of the production output from the dehydration process are accomplished. Some care should be taken for no lack of the product to occur in the packaging. The amount of product in each packaging will depend on the form of the chosen packaging, if glass pot, plastic pot, or plastic package.

2.3.- Packaging

The black pepper (in whole or ground) should be packed into polypropylene packagings (bags or flasks) or glass. All packagings must be hermetically sealed to avoid loss in the mass or modifications in the moisture content. Some care should be taken when removing the air from within the packaging before sealing. The vacuum packaging improves the conservation of the quality of the dehydrated pepper.

2.4.-Storage

The dehydrated pepper must be stored in fresh places that are protected from the light and moisture. The light alters the color, whereas the heat reduces the life time of the product.