Well Known Mistakes of Consumer about Black Table Olives

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Abstract
Black table olive consumption is both culture and consumption habit in Mediterranean countries. Beside that as a parallel to increased knowledge of healthy nutrition table olive consumption was increased in worldwide. Unfortunately, there is a lack of dissemination scientific information on black table olive characteristics related to consumer buying and eating choices. So that this work is aimed to emphasize information on some sensorial characteristics of table olive which related to indicators of natural process and quality to help the consumer for correct evaluation of table olive product.

Introduction
Table olive processing knowledge possible started with curing olive in another word debittering of olives with dry salt or brine. Because uses of salt known as one of the oldest method for curing and storage of foods. Nowadays dry salt or brine debittering still used in both homemade and industrial processed olive products. Debittering of olives with alkaline was comparatively new method when compared to brine or dry salt debittering of olives. Other olive debittering method such as drying has limited uses in olive industry. All processing process has special effect on olive quality and characteristics.

Factors affecting olive choice of consumer
Nearly 90% of olives selling were occurred in in open packages by tasting olives. So that consumer can see, smell, touch and taste of olives before buying. Colors of olive seed also reported as one factor for giving decision for buying. Basic factors affecting olive choice of consumer was summarized as follows; taste, price, olive size, seed size, seed color, surface structure (smooth, less wrinkled or highly wrinkled) of olive, surface and flesh color of olive and easiness of separation from seed.

Well known mistakes about table olives
Consumer general thought about color of table olive seed was well known mistakes about table olives. Table olive seed was thought as an indicator for natural processing, quality, process method and variety. This misunderstands cause reduction of table olive consumption. Because no matter what process method is used for production black table olive seed turn black color during processes if olive is harvested at late maturation stages. During process natural coloring pigments transfer to both brine and seed surface. So that brine and seed color turns purple or black. Natural coloring pigment of olive flesh gets contact with seed when olive reaches at late maturation stages. So that olive seed is black before processing. Furthermore if olives were harvested before the coloring pigment not reached seed surface but olives processed to natural...
brining or alkaline debittering-after brining process seed color also turn black or purple because transfer of coloring pigment by diffusion.

Coloring agent or paint uses for black table olive not required because nature of olives. Coloring agent or paint was not necessary for produce black table olive processing. Olives’ own natural color pigments are already enough to make olive peel and flesh black. So that there is no need to use any colorant for black olive industry. Additionally any report or audit result or research results for using colorant in black table olive are found in this field.

Only ferrous gluconate and / or ferro lactate can be used to stabilize the color of black olives which have been blackened by oxidation. Their limits for olive blackened by oxidation according to Turkish Food Codex Regulation on Food Additives were given in Table 1. Ferrous gluconate and / or ferrous lactate are not coloring agent or paint. They are containing iron ion and it is fixed black color from further discoloration during brining processes and shelf life storage of black olives. They are also uses similar forms in food supplements.

<table>
<thead>
<tr>
<th>E-code</th>
<th>Name</th>
<th>Maximum amount (mg / l or mg / kg)</th>
<th>Footnotes Limitations/Exceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>E 579</td>
<td>Ferrous gluconate</td>
<td>150</td>
<td>Only olive blackened by oxidation</td>
</tr>
<tr>
<td>E 585</td>
<td>Ferrous lactate</td>
<td>150</td>
<td>Only olive blackened by oxidation</td>
</tr>
</tbody>
</table>

Table 1: Limits of ferrous gluconate and ferrous lactate for olive according to Turkish Food Codex Regulation on Food Additives.

The fortification of food and beverages with iron is a special importance for public health. Due to their high bioavailability ferrous mineral salts, such as iron (II) gluconate and iron (II) lactate are attractive ingredients for enrichment of food, beverages or food supplement. As much as it is used within the specified limits as food ingredients they are safe for consumer.

Certain food preservatives may be used in limited quantities permitted by applicable laws or standards. Additives that can be used as preservatives for table olives according to Turkish Food Codex Regulation on Food Additives were given in Table 2. Table olive preservation generally based on salt, pasteurization, special packaging system such as modified atmosphere or canned packages in brine and preservative ingredient uses. If preservatives are not used these table olives can be product ingredient free but it requires higher pasteurization condition and special packaging systems. If pasteurization and preservative ingredient are not possible to use salt content of olive have to be increased by adding salt in brine or olive and sauce mix. Each salt, pasteurization, preservative uses had its own negative effect on consumer.

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</thead>
<tbody>
<tr>
<td>E 200-203</td>
<td>Sorbic acid - sorbates</td>
<td>1000</td>
<td>Only olive and olive-based preparations</td>
</tr>
<tr>
<td>E 210-213</td>
<td>Benzoic acid - benzoates</td>
<td>500</td>
<td>Only olive and olive-based preparations</td>
</tr>
<tr>
<td>E 200-213</td>
<td>Sorbic acid - sorbates; Benzoic acid - benzoates</td>
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Table 2: Additives that can be used as preservatives for table olives according to Turkish Food Codex Regulation on Food Additives.

Pasteurization reduces heat sensitive component content in olive and gives some times cooked taste on the other hand high salt content reduce sensory characters and cause health problem related to high salt consumption. Additive free olives generally thought as healthier than additive used one. But consumption of olive which had high salt content also causes maybe higher health problems than preservatives.

Olive generally recognized as safe and does not cause any food poisoning but it is stated that olives produced under uncontrolled conditions may cause serious poisoning. So that hygiene conditions and process techniques are important for table olive production and consumer safety. Not only for food poisoning but also high salt content can cause important and permanent health problems for consumer. Consumer should prefer original labeled product from producer which are under control of legal authorities.
Conclusion

Olive one of the unique fruits in Mediterranean region and had beneficial effect on consumer. But there are well known mistakes about black table olives which cause buying and consuming habit. Unrealistic media and social news cause disinformation. Unfortunately these new announces that color of olive seeds as an indicator of natural process or quality and coloring agent uses for black table olive production and excessive preservative adding in olive packages. Actually there is no direct correlation between seed color, process method, there is no report or evidence on coloring agent uses in olive processing industry and like other food additives preservatives can be use between legal limits for all foods.