

# Currants and Gooseberries

Revised 2018

## Thermal Properties

|                              | Red & White Currants |                   | European Black Currants |                   | Gooseberries      |                   |
|------------------------------|----------------------|-------------------|-------------------------|-------------------|-------------------|-------------------|
|                              | English              | Metric            | English                 | Metric            | English           | Metric            |
| Moisture, %                  | 83.95                | --                | 81.96                   | --                | 87.87             | --                |
| Protein, %                   | 1.40                 | --                | 1.40                    | --                | 0.88              | --                |
| Fat, %                       | 0.20                 | --                | 0.41                    | --                | 0.58              | --                |
| Carbohydrate, %              | 13.80                | --                | 15.38                   | --                | 10.18             | --                |
| Fiber, %                     | 4.30                 | --                | 0.00                    | --                | 4.30              | --                |
| Ash, %                       | 0.66                 | --                | 0.86                    | --                | 0.49              | --                |
| Specific Heat Above Freezing | 0.92<br>Btu/lb*°F    | 3.85<br>kJ/(kg*K) | 0.89<br>Btu/lb*°F       | 3.71<br>kJ/(kg*K) | 0.94<br>Btu/lb*°F | 3.95<br>kJ/(kg*K) |
| Specific Heat Below Freezing | 0.47<br>Btu/lb*°F    | 1.98<br>kJ/(kg*K) | 0.47<br>Btu/lb*°F       | 1.95<br>kJ/(kg*K) | 0.47<br>Btu/lb*°F | 1.96<br>kJ/(kg*K) |
| Latent Heat of Fusion        | 120 Btu/lb           | 280 kJ/kg         | 118 Btu/lb              | 274 kJ/kg         | 126 Btu/lb        | 293 kJ/kg         |

## Storage Conditions

|                        |              | Fresh                    | Frozen              |                     |
|------------------------|--------------|--------------------------|---------------------|---------------------|
| Temperature            |              | 31 to 32°F (-0.6 to 0°C) | 0°F (-17.8°C)       | -10°F (-23.3°C)     |
| Relative Humidity      |              | 90 to 95%                |                     |                     |
| Storage Period:        | Currants     | 1 to 2 weeks             | 18 months w/sugar   | 24 months w/sugar   |
|                        | Gooseberries | 2 to 4 weeks             | 12 months w/o sugar | 18 months w/o sugar |
| Highest Freezing Point |              | 30.2°F (-1.1°C)          |                     |                     |

## Fresh Berries

Fresh currants and gooseberries should be firm, bright, and free of mechanical injury and incipient decay. Currants and gooseberries are not stored except when it is necessary to hold them for processing. Both types of berries should be cooled to 32°F (0°C) soon after picking to retard deterioration. A temperature of 31 to 32°F (-0.6 to 0°C) with a relative humidity of 90 to 95% is recommended for handling of both currants and gooseberries. Currants in good condition can be stored 1 to 2 weeks. Black currants, which are different in character from red and white currants, have been

stored up to 4 weeks in air + 40% CO<sub>2</sub> in the United Kingdom. Gooseberries in good condition may have a storage life of 2 to 4 weeks, but eventually there will be some collapsing berries. Gooseberries stored for as long as 3 to 4 weeks at the recommended temperature should be processed immediately after removal from storage. Storage of hard-green gooseberries for longer periods at 32°F (0°C) in perforated polyethylene bags is possible if some CO<sub>2</sub> is allowed to accumulate. They are not injured by 8% CO<sub>2</sub>.

Since their implication as hosts to the white pine blister rust, currants and gooseberry production in the U.S. has all but disappeared, but may return thanks to recently identified resistant varieties. To replace lost North American production, currants and gooseberry production has increased in the UK and other north European countries, where much of the fruit goes into the manufacture of juice. Only small quantities of currants or gooseberries are frozen as whole berries. Red currants are processed largely for juice concentrate to be used for jelly and bakery filling jellies within the U.S.

## Diseases and Injuries

|                                 |  |
|---------------------------------|--|
| <b>Cladosporium Mold</b>        | Olive green color, superficial on outside of berry, causing little or no flesh decay, but makes the fruit unacceptable for marketing.<br><br><b>Control:</b> Careful handling and prompt cooling and shipment at as close to 32°F (0°C) as possible.   |
| <b>Gray Mold Rot (Botrytis)</b> | The fungus at first forms small brown spots usually on one side of the fruit which enlarge and become soft. The fruit becomes covered with the characteristic gray spore mass.<br><br><b>Control:</b> Preharvest sprays with fungicides. Field and packinghouse sanitation. Prompt cooling after harvest with storage at 32°F (0°C). Elevated CO <sub>2</sub> atmospheres are fungistatic to Botrytis. |

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