

COMPOSITIONAL GUIDELINES FOR HONEY PURITY

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The following characteristics distinguish honey (which originates predominantly from nectar) from honeydew (collected by bees from aphid excretions), and from honey admixed with other carbohydrate materials. Honey of predominantly floral nectar origin:

1. Has constant direct polarization value (not specific rotation) more negative than -2°S .^{a/} (1)
2. Contains between 58% and 80%^{b/} monosaccharides. (1)
3. Contains between 3.25 and 18% disaccharides. (1)
4. Contains less than 4% higher sugars. (1)
5. Contains more than 31% fructose. (1)
6. Contains less than 38% glucose, unless appreciable amounts of pollen from one of the following plants is present: athel tree (Tamarix aphylla), cotton (Gossypium hirsutum), blue curls (Trichostema lanceolatum), or manzanita (Arctostaphylos spp.). (1)
7. Has a fructose/glucose ratio of at least 1 unless pollen from blue curls is present. (1)
8. Contains less than 8% sucrose ^{c/}. (1)
9. Contains more than 65 mg. true protein per 100 gm honey^{d/}. (2)
10. Contains less than 20 mg hydroxymethylfurfural per 100 gm. (3)
11. Contains more than 15 mg proline per 100 gm honey. (4)
12. Has $\delta^{13}\text{C}$ more negative than $-22.5^{\circ}/_{\text{OO}}$. (5, 6)
13. Contains no maltodextrins ^{e/}. (7).

^{a/} If polarization is more positive than -2°S , the material may be classified as a honeydew honey, providing it contains melezitose (8); does not contain maltodextrins (7); and contains less than 8% sucrose.

b/ All values are calculated on the "as-is" basis.

c/ Material containing more than 8% sucrose will qualify as honey if the sucrose content is reduced to 5% or less after it is adjusted, without heating, to about 18.6% moisture and held 3 weeks at 37°C.

d/ By "true protein" is meant material not passing a dialysis membrane as specified in the procedure (2).

e/ i.e., The material must pass the Kushnir test.

Probable Cause of Failure to Meet Individual Guidelines

<u>Honeydew</u>		<u>Honey with Added Material</u>				
		<u>Invert Sirup</u>		<u>CCS^{a/}</u>	<u>HFCS^{b/}</u>	
		<u>Partially inverted</u>	<u>Largely Inverted</u>			
			<u>Acid</u>	<u>Enzyme</u>		
1	X	X			X	
2	X			X(+)	X(-)	
3		X(+)		X(-)	X(+)	
4	X				X	
5	X		X		X	
6				X	X	
7		X	X	X		
8		X			X	
9		X	X	X	X	X
10			X		X	
11		X	X	X	X	X
12		X	X	X	X	X
13					X	X

a/ Conventional Corn Sirup.

b/ High-fructose Corn Sirup.

References

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