

April 6, 2018

### Replacement of Primex Brand Hydrogenated Vegetable Shortening

As of April 11th, 2018 Primex brand hydrogenated vegetable oil (HVO) will no longer be included in diets manufactured by Envigo Teklad Diets. Diets made after April 11th replace Primex with an USP, food-grade HVO that has a similar texture and fatty acid profile (see table). Manufacturing tests revealed no appreciable differences in physical qualities of the finished diet. While diet numbers will not change, you may notice an updated diet title and ingredient description on the diet datasheet.

While we strive to minimize supplier changes, due to the upcoming FDA ban on trans fats in human foods, Primex is no longer in production. The replacement HVO is more expensive, as the market for trans fat-containing oils has shrunk. For diets containing HVO at the most typical inclusion rates of 100-300 g/kg this will result in an increase in price of ~\$3-8/kg diet.

Depending on your research goals and desire for relevance to human diets, you may wish to replace your Primex-containing diet with a HVO without trans fats such as Crisco. Crisco is a proprietary HVO with minimal trans fats (see table). We also have several popular obesity inducing diets with alternate fat sources like lard or milkfat that may be suitable for your research. Contact a nutritionist to discuss alternate options.

Comparison of the fatty acid profile of Primex, Envigo Teklad's Replacement HVO and Crisco.

Fatty Acids, %	Primex HVO <sup>1</sup>	Replacement HVO <sup>2</sup>	Crisco <sup>3</sup>
Trans fatty acids	23.9 - 36.1	26.4 - 32.8	0.6
Saturated fatty acids	25.3 - 27.1	24.2 - 24.5	25.8
Monounsaturated fatty acids	25.3 - 33.3	29 - 34.9	18.7
Polyunsaturated fatty acids	5.6 - 9.0	7.7 - 8.0	49.5
16:0 palmitic acid	14.0 - 17.4	11 - 12	16.9
18:0 stearic acid	9.1 - 11.5	11.8 - 12.5	9.6
18:1 n9T elaidic acid	22.2 - 34.7	24.5 - 30.6	0
18:1 n9C oleic acid	16.6 - 26.5	21.5 - 28.5	18.1
18:1 n7C vaccenic acid	2.2 - 2.4	2.2	1.2
18:1 other cis isomers	6.3 - 7.8	6.2 - 6.5	0
18:2 n6 linoleic acid	5.8 - 9.1	7.7 - 7.8	44.8
18:2 other trans isomers	3.2 - 4.0	3.7	0.5
18:3 n3 linolenic acid	0.3 - 0.5	0.2	6.1
19:0 nonadecanoic acid	0.6 - 0.7	0.6	0
20:0 arachidic acid	0.3 - 0.4	0.4-0.5	0.4

<sup>1</sup>Range for Primex HVO represents the average  $\pm$  1 standard deviation (soybean and cottonseed or palm oil; n = 4).

<sup>2</sup>Replacement Hydrogenated Vegetable Oil is a UPS food grade partially HVO (soybean and cottonseed; n = 2).

<sup>3</sup>Crisco fatty acid profile determined in 2016 (n = 1).

For additional questions or a diet consultation please contact our nutritionists at [Askanutritionist@envigo.com](mailto:Askanutritionist@envigo.com). Thank you for your continued support of Envigo Teklad Diets.