

Food and Drug Administration, HHS

§ 178.3650

the wavelength intervals (mμ), 280–299, 300–319, 320–359, 360–400.

a. If the spectrum then shows no discernible peak corresponding to the absorbance maximum of the pyrene reference standard solution at 334 mμ, the maximum absorbances in the respective wavelength intervals recorded shall not exceed those prescribed in paragraph (d)(1)(ii) of this section.

b. If such a peak is evident in the spectrum of the sample solution, and the spectrum as a whole is not incompatible with that of a pyrene contaminant yielding such a peak of the observed absorbance, calculate the concentration of pyrene that would yield this peak (334 m) by the base-line technique described in ASTM method E169–63 (Reapproved 1981), “Standard Recommended Practices for General Techniques of Ultraviolet Quantitative Analysis,” which is incorporated by reference. The availability of this incorporation by reference is given in paragraph (b)(1)(i) of this section. Correct each of the maximum absorbances in the respective specified wavelength intervals by subtracting the absorbance due to pyrene, determined as follows:

$$\text{Absorbance due to pyrene} = \frac{C_p \times S_a}{S_p}$$

where:

C_p=Calculated concentration of pyrene in sample solution;

S_p=Concentration of pyrene reference standard solution in same units of concentration;

S_a=Absorbance of pyrene reference standard solution at wavelength of maximum absorbance of sample solution in the respective specified wavelength intervals.

Also calculate the pyrene content of the oil sample in parts per million as follows:

$$\text{Pyrene content (p. p. m.)} = \frac{(200/1000) \times C}{20/1000} = 10C$$

where:

C=Calculated concentration of pyrene in milligrams per liter of sample solution.

c. The pyrene content so determined shall not exceed 25 p.p.m. The maximum absorbances corrected for pyrene content as described in this step 19 for each of the speci-

fied wavelength intervals shall not exceed the limits prescribed in paragraph (d)(1)(ii) of this section.

d. If the spectrum as a whole of the sample solution is in any respect clearly incompatible with the presence of pyrene as the source of the peak at 334 mμ, then the maximum absorbances in the respective wavelength intervals without correction for any assumed pyrene content shall not exceed the limits prescribed in paragraph (d)(1)(ii) of this section.

[42 FR 14609, Mar. 15, 1977, as amended at 47 FR 11847, Mar. 19, 1982; 49 FR 10112, Mar. 19, 1984; 54 FR 24898, June 12, 1989]

§ 178.3650 Odorless light petroleum hydrocarbons.

Odorless light petroleum hydrocarbons may be safely used, as a component of nonfood articles intended for use in contact with food, in accordance with the following prescribed conditions:

(a) The additive is a mixture of liquid hydrocarbons derived from petroleum or synthesized from petroleum gases. The additive is chiefly paraffinic, isoparaffinic, or naphthenic in nature.

(b) The additive meets the following specifications:

(1) Odor is faint and not kerosenic.

(2) Initial boiling point is 300 °F minimum.

(3) Final boiling point is 650 °F maximum.

(4) Ultraviolet absorbance limits determined by method specified in §178.3620(b)(1)(ii), as follows:

| Wavelength (Mμ) | Maximum absorbance per centimeter optical pathlength |
|------------------|--|
| 280 to 289 | 4.0 |
| 290 to 299 | 3.3 |
| 300 to 329 | 2.3 |
| 330 to 360 | .8 |

(c) The additive is used as follows:

| Use | Limitations |
|--|---|
| As a plasticizer and absorber oil in the manufacture of polyolefin articles authorized for food contact use. | In an amount not to exceed that required to produce intended effect, consistent with good manufacturing practice. |
| As a lubricant of fibers of textiles authorized for food contact use. | At a use level not to exceed 0.15 percent by weight of finished fibers. |
| As a component of adhesives | Complying with § 175.105 of this chapter. |
| As a defoamer in the manufacture of paper and paperboard | Complying with § 176.210 of this chapter. |
| As a defoamer in coatings | Complying with § 176.200 of this chapter. |