§ 579.22 Ionizing radiation for treatment of laboratory animal diets.

Ionizing radiation for treatment of complete diets for laboratory animals (mice, rats, and hamsters) may be safely used under the following conditions:

(a) Energy sources. Ionizing radiation is limited to:

(1) Gamma rays for sealed units of the radionuclides cobalt-60 or cesium-137.

(2) Electrons generated from machine sources at energy levels not to exceed 10 million electron volts.

(b) Uses. The ionizing radiation is used or intended for use in single treatment as follows:

<table>
<thead>
<tr>
<th>Food for irradiation</th>
<th>Limitations</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bagged complete diets for laboratory animals (mice, rats, hamsters, rabbits, and guinea pigs).</td>
<td>Absorbed dose: Not to exceed 50 kiloGrays (5 megarads).</td>
<td>Microbial disinfection.</td>
</tr>
</tbody>
</table>

[51 FR 5993, Feb 19, 1986; 51 FR 8315, Mar. 11, 1986, as amended at 58 FR 18148, Apr. 8, 1993]

§ 579.40 Ionizing radiation for the treatment of poultry feed and poultry feed ingredients.

Ionizing radiation for the treatment of complete poultry diets and poultry feed ingredients may be safely used as follows:

(a) Energy sources. Ionizing radiation is limited to gamma rays from sealed units of cobalt-60.

(b) Limitation. The ionizing radiation is used for feed or feed ingredients that do not contain drugs.

(c) Use. Ionizing radiation is used as a single treatment for rendering complete poultry diets or poultry feed ingredients salmonella negative as follows:

(1) Minimum dose 2.0 kiloGrays (kGy) (0.2 megarad (Mrad)); maximum dose 25 kGy (2.5 megarads Mrad). The absorbed dose of irradiation is to be based on initial concentration of salmonella using the relationship that 1.0 kGy (0.1 Mrad) reduces salmonella concentration by one log cycle (one decimal reduction).

(2) Feeds treated by irradiation should be formulated to account for nutritional loss.

(3) If an irradiated feed ingredient is less than 5 percent of the final product, the final product can be irradiated without being considered to be re-irradiated.

[60 FR 50099, Sept. 28, 1995]
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>582.1165</td>
<td>Butane</td>
</tr>
<tr>
<td>582.1191</td>
<td>Calcium carbonate.</td>
</tr>
<tr>
<td>582.1193</td>
<td>Calcium chloride.</td>
</tr>
<tr>
<td>582.1195</td>
<td>Calcium citrate.</td>
</tr>
<tr>
<td>582.1197</td>
<td>Calcium gluconate.</td>
</tr>
<tr>
<td>582.1205</td>
<td>Calcium hydroxide.</td>
</tr>
<tr>
<td>582.1210</td>
<td>Calcium oxide.</td>
</tr>
<tr>
<td>582.1217</td>
<td>Calcium phosphate.</td>
</tr>
<tr>
<td>582.1235</td>
<td>Caramel.</td>
</tr>
<tr>
<td>582.1240</td>
<td>Carbon dioxide.</td>
</tr>
<tr>
<td>582.1275</td>
<td>Dextrans.</td>
</tr>
<tr>
<td>582.1320</td>
<td>Glycerin.</td>
</tr>
<tr>
<td>582.1324</td>
<td>Glyceryl monostearate.</td>
</tr>
<tr>
<td>582.1355</td>
<td>Helium.</td>
</tr>
<tr>
<td>582.1366</td>
<td>Hydrogen peroxide.</td>
</tr>
<tr>
<td>582.1400</td>
<td>Lecithin.</td>
</tr>
<tr>
<td>582.1425</td>
<td>Magnesium carbonate.</td>
</tr>
<tr>
<td>582.1428</td>
<td>Magnesium hydroxide.</td>
</tr>
<tr>
<td>582.1431</td>
<td>Magnesium oxide.</td>
</tr>
<tr>
<td>582.1480</td>
<td>Methylcellulose.</td>
</tr>
<tr>
<td>582.1500</td>
<td>Monoammonium glutamate.</td>
</tr>
<tr>
<td>582.1516</td>
<td>Monopotassium glutamate.</td>
</tr>
<tr>
<td>582.1535</td>
<td>Papain.</td>
</tr>
<tr>
<td>582.1613</td>
<td>Potassium bicarbonate.</td>
</tr>
<tr>
<td>582.1619</td>
<td>Potassium carbonate.</td>
</tr>
<tr>
<td>582.1625</td>
<td>Potassium citrate.</td>
</tr>
<tr>
<td>582.1631</td>
<td>Potassium hydroxide.</td>
</tr>
<tr>
<td>582.1643</td>
<td>Potassium sulfate.</td>
</tr>
<tr>
<td>582.1655</td>
<td>Propyl alcohol.</td>
</tr>
<tr>
<td>582.1666</td>
<td>Propylene glycol.</td>
</tr>
<tr>
<td>582.1810</td>
<td>Sodium propionate.</td>
</tr>
<tr>
<td>582.1825</td>
<td>Sodium sorbitol.</td>
</tr>
<tr>
<td>582.1838</td>
<td>Sodium starch.</td>
</tr>
<tr>
<td>582.1840</td>
<td>Sodium stearate.</td>
</tr>
<tr>
<td>582.1850</td>
<td>Sodium stearene.</td>
</tr>
<tr>
<td>582.1880</td>
<td>Sodium stearoyl lactate.</td>
</tr>
<tr>
<td>582.1973</td>
<td>Beeswax.</td>
</tr>
<tr>
<td>582.1975</td>
<td>Bleached beeswax.</td>
</tr>
<tr>
<td>582.1978</td>
<td>Carnauba wax.</td>
</tr>
<tr>
<td>582.2122</td>
<td>Aluminum calcium silicate.</td>
</tr>
<tr>
<td>582.2227</td>
<td>Calcium silicate.</td>
</tr>
<tr>
<td>582.2437</td>
<td>Magnesium silicate.</td>
</tr>
<tr>
<td>582.2727</td>
<td>Sodium aluminosilicate.</td>
</tr>
<tr>
<td>582.2729</td>
<td>Hydrated sodium calcium aluminosilicate.</td>
</tr>
<tr>
<td>582.2906</td>
<td>Tricalcium silicate.</td>
</tr>
<tr>
<td>582.3013</td>
<td>Ascorbic acid.</td>
</tr>
<tr>
<td>582.3021</td>
<td>Benzoic acid.</td>
</tr>
<tr>
<td>582.3041</td>
<td>Erythorbic acid.</td>
</tr>
<tr>
<td>582.3081</td>
<td>Propionic acid.</td>
</tr>
<tr>
<td>582.3089</td>
<td>Sorbic acid.</td>
</tr>
<tr>
<td>582.3109</td>
<td>Thiodipropionic acid.</td>
</tr>
<tr>
<td>582.3149</td>
<td>Ascorbyl palmitate.</td>
</tr>
<tr>
<td>582.3169</td>
<td>Butylated hydroxyanisole.</td>
</tr>
<tr>
<td>582.3173</td>
<td>Butylated hydroxytoluene.</td>
</tr>
<tr>
<td>582.3189</td>
<td>Calcium ascorbate.</td>
</tr>
<tr>
<td>582.3221</td>
<td>Calcium propionate.</td>
</tr>
<tr>
<td>582.3225</td>
<td>Calcium sorbate.</td>
</tr>
<tr>
<td>582.3280</td>
<td>Dilauryl thiodipropionate.</td>
</tr>
<tr>
<td>582.3336</td>
<td>Gum guaiac.</td>
</tr>
<tr>
<td>582.3400</td>
<td>Methylparaben.</td>
</tr>
<tr>
<td>582.3636</td>
<td>Potassium bisulfite.</td>
</tr>
<tr>
<td>582.3671</td>
<td>Potassium metabisulfite.</td>
</tr>
<tr>
<td>582.3680</td>
<td>Potassium sorbate.</td>
</tr>
<tr>
<td>582.3690</td>
<td>Propyl gallate.</td>
</tr>
<tr>
<td>582.3700</td>
<td>Propylyparaben.</td>
</tr>
<tr>
<td>582.3713</td>
<td>Sodium ascorbate.</td>
</tr>
<tr>
<td>582.3733</td>
<td>Sodium benzoate.</td>
</tr>
<tr>
<td>582.3759</td>
<td>Sodium bisulfite.</td>
</tr>
<tr>
<td>582.3766</td>
<td>Sodium metabisulfite.</td>
</tr>
<tr>
<td>582.3784</td>
<td>Sodium propionate.</td>
</tr>
<tr>
<td>582.3798</td>
<td>Sodium sorbate.</td>
</tr>
<tr>
<td>582.3890</td>
<td>Tocopherols.</td>
</tr>
<tr>
<td>582.4101</td>
<td>Diacetyl tartaric acid esters of mono- and diglycerides of edible fats or oils, or edible fat-forming fatty acids.</td>
</tr>
<tr>
<td>582.4505</td>
<td>Mono- and diglycerides of edible fats or oils, or edible fat-forming acids.</td>
</tr>
<tr>
<td>582.4666</td>
<td>Propylene glycol.</td>
</tr>
<tr>
<td>582.5017</td>
<td>Aspartic acid.</td>
</tr>
<tr>
<td>582.5049</td>
<td>Aminoacetic acid.</td>
</tr>
<tr>
<td>582.5065</td>
<td>Linoleic acid.</td>
</tr>
<tr>
<td>582.5118</td>
<td>Alanine.</td>
</tr>
<tr>
<td>582.5145</td>
<td>Arginine.</td>
</tr>
<tr>
<td>582.5159</td>
<td>Biotin.</td>
</tr>
<tr>
<td>582.5191</td>
<td>Calcium carbonate.</td>
</tr>
<tr>
<td>582.5195</td>
<td>Calcium citrate.</td>
</tr>
<tr>
<td>582.5201</td>
<td>Calcium glycerophosphate.</td>
</tr>
<tr>
<td>582.5210</td>
<td>Calcium oxide.</td>
</tr>
<tr>
<td>582.5212</td>
<td>Calcium pantothenate.</td>
</tr>
<tr>
<td>582.5217</td>
<td>Calcium phosphate.</td>
</tr>
<tr>
<td>582.5223</td>
<td>Calcium pyrophosphate.</td>
</tr>
<tr>
<td>582.5230</td>
<td>Calcium sulfate.</td>
</tr>
<tr>
<td>582.5245</td>
<td>Carotene.</td>
</tr>
<tr>
<td>582.5250</td>
<td>Choline bitartrate.</td>
</tr>
<tr>
<td>582.5252</td>
<td>Choline chloride.</td>
</tr>
<tr>
<td>582.5260</td>
<td>Copper gluconate.</td>
</tr>
<tr>
<td>582.5271</td>
<td>Cysteine.</td>
</tr>
<tr>
<td>582.5273</td>
<td>Cystine.</td>
</tr>
<tr>
<td>582.5304</td>
<td>Ferric pyrophosphate.</td>
</tr>
<tr>
<td>582.5306</td>
<td>Ferric sodium pyrophosphate.</td>
</tr>
</tbody>
</table>
Subpart A—General Provisions

§ 582.1 Substances that are generally recognized as safe.

(a) It is impracticable to list all substances that are generally recognized as safe for their intended use. However, by way of illustration, the Commissioner regards such common food ingredients as salt, pepper, sugar, vinegar, baking powder, and monosodium glutamate as safe for their intended use. The lists in subparts B through H of this part include additional substances that, when used for the purposes indicated, in accordance with good manufacturing or feeding practice, are regarded by the Commissioner as generally recognized as safe for such uses.

(b) For the purposes of this section, good manufacturing or feeding practice
§ 582.10 Spices and other natural seasonings and flavorings.

Spices and other natural seasonings and flavorings that are generally recognized as safe for their intended use, within the meaning of section 409 of the act, are as follows:

<table>
<thead>
<tr>
<th>Common name</th>
<th>Botanical name of plant source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa herb and seed</td>
<td>Medicago sativa L.</td>
</tr>
<tr>
<td>Alispice</td>
<td>Pimenta officinalis Lindl.</td>
</tr>
<tr>
<td>Ambrette seed</td>
<td>Hibiscus abelmoschus L.</td>
</tr>
<tr>
<td>Angelica</td>
<td>Angelica archangelica L. or other spp. of Angelica.</td>
</tr>
<tr>
<td>Angelica root</td>
<td>Do.</td>
</tr>
<tr>
<td>Angelica seed</td>
<td>Do.</td>
</tr>
<tr>
<td>Angostura (cusparia bark)</td>
<td>Galippe officinalis Hancock.</td>
</tr>
<tr>
<td>Anise</td>
<td>Pimpinella anisum L.</td>
</tr>
<tr>
<td>Anise, star</td>
<td>Illicium verum Hook. f.</td>
</tr>
<tr>
<td>Balm (lemon balm)</td>
<td>Melissa officinalis L.</td>
</tr>
<tr>
<td>Basil, bush</td>
<td>Ocimum minimum L.</td>
</tr>
<tr>
<td>Basil, sweet</td>
<td>Ocimum basilicium L.</td>
</tr>
<tr>
<td>Bay</td>
<td>Laurus nobilis L.</td>
</tr>
<tr>
<td>Calendula</td>
<td>Calendula oficinalis L.</td>
</tr>
<tr>
<td>Camomile (chamomile), English or Roman</td>
<td>Anthemis nobilis L.</td>
</tr>
<tr>
<td>Camomile (chamomile), German or Hungarian</td>
<td>Matricaria chamomilla L.</td>
</tr>
<tr>
<td>Capers</td>
<td>Capparis spinosa L.</td>
</tr>
<tr>
<td>Capsicum</td>
<td>Capsicum frutescens L. or Capsicum annuum L.</td>
</tr>
<tr>
<td>Caraway</td>
<td>Carum carvi L.</td>
</tr>
<tr>
<td>Caraway, black (black cumin)</td>
<td>Angelica sativa L.</td>
</tr>
<tr>
<td>Cardamom (cardamon)</td>
<td>Elettaria cardamomum Maton.</td>
</tr>
<tr>
<td>Cassia, Chinese</td>
<td>Cinnamomum cassia Blume.</td>
</tr>
<tr>
<td>Cassia, Padang or Batavia</td>
<td>Cinnamomum burmanni Blume.</td>
</tr>
<tr>
<td>Cassia, Saigon</td>
<td>Cinnamomum loureani Nees.</td>
</tr>
<tr>
<td>Cayenne pepper</td>
<td>Capsicum frutescens L. or Capsicum annuum L.</td>
</tr>
<tr>
<td>Celery seed</td>
<td>Apium graveolens L.</td>
</tr>
<tr>
<td>Chervil</td>
<td>Anthus cerefolium (L) . Hofm.</td>
</tr>
<tr>
<td>Chives</td>
<td>Allium schoenoprasum L.</td>
</tr>
<tr>
<td>Cinnamon, Ceylon</td>
<td>Cinnamomum zeylanicum Nees.</td>
</tr>
<tr>
<td>Cinnamon, Chinese</td>
<td>Cinnamomum cassia Blume.</td>
</tr>
<tr>
<td>Cinnamon, Saigon</td>
<td>Cinnamomum loureani Nees.</td>
</tr>
<tr>
<td>Clary (clary sage)</td>
<td>Salvia sclarea L.</td>
</tr>
<tr>
<td>Clover</td>
<td>Trifolium spp.</td>
</tr>
</tbody>
</table>
### § 582.20 Essential oils, oleoresins (solvent-free), and natural extractives (including distillates).

Essential oils, oleoresins (solvent-free), and natural extractives (including distillates) that are generally recognized as safe for their intended use, within the meaning of section 409 of the act, are as follows:

<table>
<thead>
<tr>
<th>Common name</th>
<th>Botanical name of plant source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa</td>
<td>Medicago sativa L.</td>
</tr>
<tr>
<td>Allspice</td>
<td>Pimenta officinalis L.</td>
</tr>
<tr>
<td>Almond, bitter (free from prussic acid)</td>
<td>Prunus amygdalus Batsch, Prunus armeniaca L. or Prunus persica (L.) Batsch.</td>
</tr>
<tr>
<td>Ambrette (seed)</td>
<td>Hibiscus moschatus Moench.</td>
</tr>
<tr>
<td>Common name</td>
<td>Botanical name of plant source</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>Angelica root</td>
<td>Angelica archangelica L.</td>
</tr>
<tr>
<td>Angelica seed</td>
<td>Do.</td>
</tr>
<tr>
<td>Angelica stem</td>
<td>Do.</td>
</tr>
<tr>
<td>Angostura (cusparia bark)</td>
<td>Galipea officinalis Hancock.</td>
</tr>
<tr>
<td>Anise</td>
<td>Pimpinella anisum L.</td>
</tr>
<tr>
<td>Asafoetida</td>
<td>Ferula assa-foetida L. and related spp. of Ferula.</td>
</tr>
<tr>
<td>Balm (lemon balm)</td>
<td>Melissa officinalis L.</td>
</tr>
<tr>
<td>Balsam of Peru</td>
<td>Myroxylon pereirae Klotzsch.</td>
</tr>
<tr>
<td>Basil</td>
<td>Ocimum basilicum L.</td>
</tr>
<tr>
<td>Bay leaves</td>
<td>Laurus nobilis L.</td>
</tr>
<tr>
<td>Bay (myrica oil)</td>
<td>Pimenta racemosa (Mill.) J. W. Moore.</td>
</tr>
<tr>
<td>Bergamot (bergamot orange)</td>
<td>Citrus aurantium L. subsp. bergamia Wright et Am.</td>
</tr>
<tr>
<td>Bitter almond (tree prussic acid)</td>
<td>Prunus amygdalus Batsch, Prunus armeniaca L., or Prunus persica (L.) Batsch.</td>
</tr>
<tr>
<td>Bois de rose</td>
<td>Aniba rosaedora Duke.</td>
</tr>
<tr>
<td>Cacao</td>
<td>Theobroma cacao L.</td>
</tr>
<tr>
<td>Camomile (chamomile) flowers, Hungarian</td>
<td>Matricaria chamomilla L.</td>
</tr>
<tr>
<td>Cananga</td>
<td>Anthemis nobilis L.</td>
</tr>
<tr>
<td>Cassia bark, Chinese</td>
<td>Cinnamomum cassia Blume.</td>
</tr>
<tr>
<td>Cassia bark, Padang or Batavia</td>
<td>Cinnamomum burmanni Blume.</td>
</tr>
<tr>
<td>Cassia bark, Saigon</td>
<td>Cinnamomum loureni Nees.</td>
</tr>
<tr>
<td>Celery seed</td>
<td>Apium graveolens L.</td>
</tr>
<tr>
<td>Cherry, wild, bark</td>
<td>Carum carvi L.</td>
</tr>
<tr>
<td>Chervil</td>
<td>Anthriscus cerefolii L.</td>
</tr>
<tr>
<td>Chicory</td>
<td>Citronella siliqua L.</td>
</tr>
<tr>
<td>Cinnamon bark, Ceylon</td>
<td>Cinnamomum zeylanicum Nees.</td>
</tr>
<tr>
<td>Cinnamon bark, Chinese</td>
<td>Cinnamomum cassia Blume.</td>
</tr>
<tr>
<td>Cinnamon bark, Saigon</td>
<td>Cinnamomum loureni Nees.</td>
</tr>
<tr>
<td>Cinnamon leaf, Chinese</td>
<td>Cinnamomum cassia Blume.</td>
</tr>
<tr>
<td>Cinnamon leaf, Saigon</td>
<td>Cinnamomum loureni Nees.</td>
</tr>
<tr>
<td>Citronella</td>
<td>Cymbopogon nardus Renule.</td>
</tr>
<tr>
<td>Citrus peels</td>
<td>Citrus spp.</td>
</tr>
<tr>
<td>Clary (clary sage)</td>
<td>Salvia sclarea L.</td>
</tr>
<tr>
<td>Clove bud</td>
<td>Eugenia Caryophyllata Thunb.</td>
</tr>
<tr>
<td>Clove leaf</td>
<td>Do.</td>
</tr>
<tr>
<td>Clove stem</td>
<td>Do.</td>
</tr>
<tr>
<td>Clover</td>
<td>Trilium spp.</td>
</tr>
<tr>
<td>Cocoa (deccacained)</td>
<td>Erythroxylum coca Lam. and other spp. of Erythroxylum.</td>
</tr>
<tr>
<td>Coffee</td>
<td>Coffee spp.</td>
</tr>
<tr>
<td>Cola nut</td>
<td>Cola acuminata Schott and Endl., and other spp. of Cola.</td>
</tr>
<tr>
<td>Coriander</td>
<td>Coriandrum sativum L.</td>
</tr>
<tr>
<td>Corn silk</td>
<td>Zea mays L.</td>
</tr>
<tr>
<td>Cumin (cuminum)</td>
<td>Cuminum cuminum L.</td>
</tr>
<tr>
<td>Curacao orange peel (orange, bitter peel)</td>
<td>Citrus aurantium L.</td>
</tr>
<tr>
<td>Cusparia bark</td>
<td>Galipea officinalis Hancock.</td>
</tr>
<tr>
<td>Dandelion</td>
<td>Taraxacum officinalis Weber and T. laevigatum DC.</td>
</tr>
<tr>
<td>Dandelion root</td>
<td>Do.</td>
</tr>
<tr>
<td>Dill</td>
<td>Anethum graveolens L.</td>
</tr>
<tr>
<td>Dog grass (quackgrass, triticum)</td>
<td>Agropyron repens (L.) Beauv.</td>
</tr>
<tr>
<td>Elder flowers</td>
<td>Sambucus canadensis L. and S. nigra L.</td>
</tr>
<tr>
<td>Estragole (esdragol, esdragon, tarragon)</td>
<td>Artemisia dracunculus L.</td>
</tr>
<tr>
<td>Estragon (tarragon)</td>
<td>Do.</td>
</tr>
<tr>
<td>Fennel, sweet</td>
<td>Foeniculum vulgare Mill.</td>
</tr>
<tr>
<td>Frangipani</td>
<td>Trigonella foemina-gracecum L.</td>
</tr>
<tr>
<td>Garlic</td>
<td>Alpinia officinalis Hance.</td>
</tr>
<tr>
<td>Geranium</td>
<td>Allium sativum L.</td>
</tr>
<tr>
<td>Geranium, East Indian</td>
<td>Pelargonium spp.</td>
</tr>
<tr>
<td>Geranium, rose</td>
<td>Pelargonium graveolens L'Her.</td>
</tr>
<tr>
<td>Ginger</td>
<td>Zingiber officinalis Rosc.</td>
</tr>
<tr>
<td>Glycyrrhiza</td>
<td>Glycyrrhiza glabra L. and other spp. of Glycyrrhiza.</td>
</tr>
<tr>
<td>Glycyrrhizin, ammoriated</td>
<td>Do.</td>
</tr>
<tr>
<td>Grapefruit</td>
<td>Citrus paradisi Macf.</td>
</tr>
<tr>
<td>Guava</td>
<td>Paidium spp.</td>
</tr>
<tr>
<td>Hickory bark</td>
<td>Carya spp.</td>
</tr>
<tr>
<td>Horehound (hearhound)</td>
<td>Manchurium vulgare L.</td>
</tr>
<tr>
<td>Common name</td>
<td>Botanical name of plant source</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>Hops</td>
<td>Humulus lupulus L.</td>
</tr>
<tr>
<td>Horsemint</td>
<td>Monarda punctata L.</td>
</tr>
<tr>
<td>Hyssop</td>
<td>Hyssopus officinalis L.</td>
</tr>
<tr>
<td>Immortelle</td>
<td>Helichrysum augustifolium DC.</td>
</tr>
<tr>
<td>Jasmine</td>
<td>Jasminum officinale L. and other spp. of Jasminum.</td>
</tr>
<tr>
<td>Juniper (berries)</td>
<td>Juniperus communis L.</td>
</tr>
<tr>
<td>Kola nut</td>
<td>Cola acuminata Schott and Endl., and other spp. of Cola.</td>
</tr>
<tr>
<td>Laurel berries</td>
<td>Laurus nobilis L.</td>
</tr>
<tr>
<td>Lavender</td>
<td>Lavandula officinalis Chaix.</td>
</tr>
<tr>
<td>Lavender, spike</td>
<td>Lavandula latifolia Vill.</td>
</tr>
<tr>
<td>Lemon</td>
<td>Hybrids between Lavandula officinalis Chaix and Lavandula latifolia Vill.</td>
</tr>
<tr>
<td>Lemon balm (see balm)</td>
<td>Citrus limon (L.) Burm. f.</td>
</tr>
<tr>
<td>Lemon grass</td>
<td>Cymbopogon citratus DC. and Cymbopogon flexuosus Stapf.</td>
</tr>
<tr>
<td>Lemon peel</td>
<td>Citrus limon (L.) Burm. f.</td>
</tr>
<tr>
<td>Licorice</td>
<td>Glycyrrhiza glabra L. and other spp. of Glycyrrhiza.</td>
</tr>
<tr>
<td>Lime</td>
<td>Citrus aurantifolia Swingle.</td>
</tr>
<tr>
<td>Linden flowers</td>
<td>Tilia spp.</td>
</tr>
<tr>
<td>Locust bean</td>
<td>Ceratonia siliqua L.</td>
</tr>
<tr>
<td>Lupulin</td>
<td>Humulus lupulus L.</td>
</tr>
<tr>
<td>Mace</td>
<td>Myristica fragrans Houtt.</td>
</tr>
<tr>
<td>Malt (extract)</td>
<td>Hordeum vulgare L., or other grains.</td>
</tr>
<tr>
<td>Mandarin</td>
<td>Citrus reticulata Blanco.</td>
</tr>
<tr>
<td>Marjoram, sweet</td>
<td>Majorana hortensis Moench.</td>
</tr>
<tr>
<td>Mate 1</td>
<td>Ilex paraguariensis St. Hil.</td>
</tr>
<tr>
<td>Melissa (see balm)</td>
<td></td>
</tr>
<tr>
<td>Menthol</td>
<td>Mentha spp.</td>
</tr>
<tr>
<td>Menthyl acetate</td>
<td>Do.</td>
</tr>
<tr>
<td>Molasses (extract)</td>
<td>Saccharum officinarum L.</td>
</tr>
<tr>
<td>Mustard</td>
<td>Brassica spp.</td>
</tr>
<tr>
<td>Naringin</td>
<td>Citrus paradisi Macf.</td>
</tr>
<tr>
<td>Neroli, bigarade</td>
<td>Citrus aurantium L.</td>
</tr>
<tr>
<td>Nutmeg</td>
<td>Myristica fragrans Houtt.</td>
</tr>
<tr>
<td>Onion</td>
<td>Allium cepa L.</td>
</tr>
<tr>
<td>Orange, bitter, flowers</td>
<td>Citrus aurantium L.</td>
</tr>
<tr>
<td>Orange, bitter, peel</td>
<td>Do.</td>
</tr>
<tr>
<td>Orange leaf</td>
<td>Citrus sinensis (L.) Osbeck.</td>
</tr>
<tr>
<td>Orange, sweet</td>
<td>Do.</td>
</tr>
<tr>
<td>Orange, sweet, peel</td>
<td>Do.</td>
</tr>
<tr>
<td>Origanum</td>
<td>Origanum spp.</td>
</tr>
<tr>
<td>Palmarosa</td>
<td>Cymbopogon martini Stapf.</td>
</tr>
<tr>
<td>Paprika</td>
<td>Capsicum annuum L.</td>
</tr>
<tr>
<td>Parsley</td>
<td>Petroselinum crispum (Mill.) Mansf.</td>
</tr>
<tr>
<td>Pepper, black</td>
<td>Piper nigrum L.</td>
</tr>
<tr>
<td>Pepper, white</td>
<td>Piper nigrum L.</td>
</tr>
<tr>
<td>Peppermint</td>
<td>Mentha piperita L.</td>
</tr>
<tr>
<td>Peruvian balsam</td>
<td>Myroxylon Pereirae Klootsch.</td>
</tr>
<tr>
<td>Petitgrain</td>
<td>Citrus aurantium L.</td>
</tr>
<tr>
<td>Petitgrain lemon</td>
<td>Citrus limon (L.) Burm. f.</td>
</tr>
<tr>
<td>Petitgrain mandarin or tangerine</td>
<td>Citrus reticulata Blanco.</td>
</tr>
<tr>
<td>Pimenta</td>
<td>Pimenta officinalis Lind.</td>
</tr>
<tr>
<td>Pimento leaf</td>
<td>Pimenta officinalis Lind.</td>
</tr>
<tr>
<td>Pipsissewa leaves</td>
<td>Chimaphila umbellata Nutt.</td>
</tr>
<tr>
<td>Pomegranate</td>
<td>Punica granatum L.</td>
</tr>
<tr>
<td>Prickly ash bark</td>
<td>Xanthoxylum (or Zanthoxylum) Americanum Mill. or Xanthoxylum clava-herculis L.</td>
</tr>
<tr>
<td>Rose absolute</td>
<td>Rosa alba L., Rosa centifolia L., Rosa damascena Mill., Rosa gallica L., and vars. of these spp.</td>
</tr>
<tr>
<td>Rose (otto of roses, attar of roses)</td>
<td>Do.</td>
</tr>
<tr>
<td>Rose buds</td>
<td>Do.</td>
</tr>
<tr>
<td>Rose flowers</td>
<td>Do.</td>
</tr>
<tr>
<td>Rose fruit (hips)</td>
<td>Do.</td>
</tr>
<tr>
<td>Rose geranium</td>
<td>Pelargonium graveolens L’Her.</td>
</tr>
<tr>
<td>Rose leaves</td>
<td>Rosa spp.</td>
</tr>
<tr>
<td>Rosemary</td>
<td>Rosmarinus officinalis L.</td>
</tr>
<tr>
<td>Rue</td>
<td>Ruta graveolens L.</td>
</tr>
<tr>
<td>Saffron</td>
<td>Crocus sativus L.</td>
</tr>
<tr>
<td>Sage</td>
<td>Salvia officinalis L.</td>
</tr>
<tr>
<td>Sage, Greek</td>
<td>Salvia triloba L.</td>
</tr>
<tr>
<td>Sage, Spanish</td>
<td>Salvia lavandulaefolia Vahl.</td>
</tr>
<tr>
<td>St. John’s bread</td>
<td>Ceratonia siliqua L.</td>
</tr>
</tbody>
</table>
§ 582.30 Natural substances used in conjunction with spices and other natural seasonings and flavorings.

Natural substances used in conjunction with spices and other natural seasonings and flavorings that are generally recognized as safe for their intended use, within the meaning of section 409 of the act, are as follows:

<table>
<thead>
<tr>
<th>Common name</th>
<th>Botanical name of plant source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algae, brown (kelp)</td>
<td>Laminaria spp. and Nereocystis spp.</td>
</tr>
<tr>
<td>Algae, red</td>
<td>Porphyr a spp. and Rhodymenia palmata (L.) Grev.</td>
</tr>
<tr>
<td>Dulse</td>
<td>Rhodymenia palmata (L.) Grev.</td>
</tr>
</tbody>
</table>

§ 582.40 Natural extractives (solvent-free) used in conjunction with spices, seasonings, and flavorings.

Natural extractives (solvent-free) used in conjunction with spices, seasonings, and flavorings that are generally recognized as safe for their intended use, within the meaning of section 409 of the act, are as follows:

<table>
<thead>
<tr>
<th>Common name</th>
<th>Botanical name of plant source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algae</td>
<td>Laminaria spp. and Nereocystis spp.</td>
</tr>
<tr>
<td>Apricot kernel (persic oil)</td>
<td>Prunus armeniaca L.</td>
</tr>
<tr>
<td>Peanut stearine</td>
<td>Arachis hypogaea L.</td>
</tr>
</tbody>
</table>
| Persic oil (see apricot kernel and peach kernel) | Cynodon oblonga Miller.

§ 582.50 Certain other spices, seasonings, essential oils, oleoresins, and natural extracts.

Certain other spices, seasonings, essential oils, oleoresins, and natural extracts that are generally recognized as safe for their intended use, within the meaning of section 409 of the act, are as follows:
§ 582.99 Adjuvants for pesticide chemicals.

Adjuvants, identified and used in accordance with 40 CFR 180.1001(c) and (d), which are added to pesticide use dilutions by a grower or applicator prior to application to the raw agricultural commodity, are exempt from the requirement of tolerances under section 409 of the act.

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§ 582.60 Synthetic flavoring substances and adjuvants.

Synthetic flavoring substances and adjuvants that are generally recognized as safe for their intended use, within the meaning of section 409 of the act, are as follows:

Acetaldehyde (ethanal).
Acetoin (acetyl methylcarbinol).
Aconitic acid (equisetic acid, citridic acid, achilleic acid).
Anethole (parapropenyl anisole).
Benzaldehyde (benzoic aldehyde).
N-Butyric acid (butanoic acid).
Cinnamaldehyde (cinnamic aldehyde).
Citral (2,6-dimethyloctadien-2,6-al-8, geranial, neral).
Decanal (N-decylaldehyde, capraldehyde, capric aldehyde, caprinaldehyde, aldehyde C-10).
Diacetyl (2,3-butanedione). Ethyl acetate.
3-Methyl-3-phenyl glycidic acid ethyl ester (ethyl-methyl-phenyl-glycidate, so-called strawberry aldehyde, C-16 aldehyde).
Ethyl vanillin.
Eugenol.
Geranoin (3,7-dimethyl-2,6 and 3,6-octadien-1-ol).
Geranyl acetate (geraniol acetate).
Glycerol (glyceryl) tributyrate (tributyrin, butyrin).
Limonene (d-, l-, and dl-).
Linalool (linalol, 3,7-dimethyl-1,6-octadien-3-ol).
Linalyl acetate (bergamol).
L-Malic acid.
Methyl anthranilate (methyl-2-amino benzoate).
Piperonal (3,4-methylenedioxy-benzaldehyde, heliotropin).
Vanillin.

§ 582.80 Trace minerals added to animal feeds.

These substances added to animal feeds as nutritional dietary supplements are generally recognized as safe when added at levels consistent with good feeding practice.\(^1\)

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1 All substances listed may be in anhydrous or hydrated form.
Subpart B—General Purpose Food Additives

§ 582.1005 Acetic acid.
(a) Product. Acetic acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1009 Adipic acid.
(a) Product. Adipic acid.
(b) [Reserved]
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used as a buffer and neutralizing agent in accordance with good manufacturing or feeding practice.

§ 582.1033 Citric acid.
(a) Product. Citric acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1057 Hydrochloric acid.
(a) Product. Hydrochloric acid.
(b) [Reserved]
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used as a buffer and neutralizing agent in accordance with good manufacturing or feeding practice.

§ 582.1061 Lactic acid.
(a) Product. Lactic acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1069 Malic acid.
(a) Product. Malic acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1073 Phosphoric acid.
(a) Product. Phosphoric acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1077 Potassium acid tartrate.
(a) Product. Potassium acid tartrate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1087 Sodium acid pyrophosphate.
(a) Product. Sodium acid pyrophosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1091 Succinic acid.
(a) Product. Succinic acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1095 Sulfuric acid.
(a) Product. Sulfuric acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1099 Tartaric acid.
(a) Product. Tartaric acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1125 Aluminum sulfate.
(a) Product. Aluminum sulfate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1127 Aluminum ammonium sulfate.
(a) Product. Aluminum ammonium sulfate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1129 Aluminum potassium sulfate.
(a) Product. Aluminum potassium sulfate.
(b) Conditions of use. This substance is generally recognized as safe when
§ 582.1131 Aluminum sodium sulfate.  
(a) Product. Aluminum sodium sulfate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1135 Ammonium bicarbonate.  
(a) Product. Ammonium bicarbonate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1137 Ammonium carbonate.  
(a) Product. Ammonium carbonate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1139 Ammonium hydroxide.  
(a) Product. Ammonium hydroxide.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1141 Ammonium phosphate.  
(a) Product. Ammonium phosphate (mono- and dibasic).  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1143 Ammonium sulfate.  
(a) Product. Ammonium sulfate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1155 Bentonite.  
(a) Product. Bentonite.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1165 Butane.  
(a) Product. Butane.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1191 Calcium carbonate.  
(a) Product. Calcium carbonate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1193 Calcium chloride.  
(a) Product. Calcium chloride.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1195 Calcium citrate.  
(a) Product. Calcium citrate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1199 Calcium gluconate.  
(a) Product. Calcium gluconate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1205 Calcium hydroxide.  
(a) Product. Calcium hydroxide.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1207 Calcium lactate.  
(a) Product. Calcium lactate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1210 Calcium oxide.  
(a) Product. Calcium oxide.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1217 Calcium phosphate.  
(a) Product. Calcium phosphate (mono-, di-, and tribasic).  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.
§ 582.1235  Caramel.  
(a) Product. Caramel.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1240  Carbon dioxide.  
(a) Product. Carbon dioxide.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1275  Dextrans.  
(a) Product. Dextrans of average molecular weight below 100,000.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1320  Glycerin.  
(a) Product. Glycerin.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1324  Glyceryl monostearate.  
(a) Product. Glyceryl monostearate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1355  Helium.  
(a) Product. Helium.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1366  Hydrogen peroxide.  
(a) Product. Hydrogen peroxide.  
(b) [Reserved]  
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used as a bleaching agent in accordance with good manufacturing or feeding practice.

§ 582.1400  Lecithin.  
(a) Product. Lecithin.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1425  Magnesium carbonate.  
(a) Product. Magnesium carbonate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1428  Magnesium hydroxide.  
(a) Product. Magnesium hydroxide.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1431  Magnesium oxide.  
(a) Product. Magnesium oxide.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1480  Methylcellulose.  
(a) Product. U.S.P. methylcellulose, except that the methoxy content shall not be less than 27.5 percent and not more than 31.5 percent on a dry-weight basis.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1500  Monoammonium glutamate.  
(a) Product. Monoammonium glutamate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1516  Monopotassium glutamate.  
(a) Product. Monopotassium glutamate.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1540  Nitrogen.  
(a) Product. Nitrogen.  
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.
§ 582.1585 Papain.
(a) Product. Papain.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1613 Potassium bicarbonate.
(a) Product. Potassium bicarbonate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1619 Potassium carbonate.
(a) Product. Potassium carbonate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1625 Potassium citrate.
(a) Product. Potassium citrate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1631 Potassium hydroxide.
(a) Product. Potassium hydroxide.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1643 Potassium sulfate.
(a) Product. Potassium sulfate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1655 Propane.
(a) Product. Propane.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1666 Propylene glycol.
(a) Product. Propylene glycol.
(b) Conditions of use. This substance is generally recognized as safe (except in cat food) when used in accordance with good manufacturing or feeding practice.

[41 FR 38657, Sept. 10, 1976, as amended at 61 FR 19544, May 2, 1996]

§ 582.1685 Rennet.
(a) Product. Rennet (rennin).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1711 Silica aerogel.
(a) Product. Silica aerogel as a finely powdered microcellular silica foam having a minimum silica content of 95.5 percent.
(b) [Reserved]
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used as a component of antifoaming agents in accordance with good manufacturing or feeding practice.

§ 582.1721 Sodium acetate.
(a) Product. Sodium acetate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1736 Sodium bicarbonate.
(a) Product. Sodium bicarbonate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1742 Sodium carbonate.
(a) Product. Sodium carbonate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1745 Sodium carboxymethylcellulose.
(a) Product. Sodium carboxymethylcellulose is the sodium salt of carboxymethylcellulose not less than 95.5 percent on a dry-weight basis, with maximum substitution of 0.95 carboxymethyl groups per anhydroglucose unit, and with a minimum viscosity of 25 centipoises per 2 percent by weight aqueous solution at 25°C.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.
§ 582.1748 Sodium caseinate.
(a) Product. Sodium caseinate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1751 Sodium citrate.
(a) Product. Sodium citrate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1763 Sodium hydroxide.
(a) Product. Sodium hydroxide.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1775 Sodium pectinate.
(a) Product. Sodium pectinate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1778 Sodium phosphate.
(a) Product. Sodium phosphate (mono-, di-, and tribasic).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1781 Sodium aluminum phosphate.
(a) Product. Sodium aluminum phosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1792 Sodium sesquicarbonate.
(a) Product. Sodium sesquicarbonate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1804 Sodium potassium tartrate.
(a) Product. Sodium potassium tartrate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1810 Sodium tripolyphosphate.
(a) Product. Sodium tripolyphosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1901 Triacetin.
(a) Product. Triacetin (glyceryl triacetate).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1973 Beeswax.
(a) Product. Beeswax (yellow wax).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1975 Bleached beeswax.
(a) Product. Bleached beeswax (white wax).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.1978 Carnauba wax.
(a) Product. Carnauba wax.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

Subpart C—Anticaking Agents
§ 582.2122 Aluminum calcium silicate.
(a) Product. Aluminum calcium silicate.
(b) Tolerance. 2 percent.
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.2227 Calcium silicate.
(a) Product. Calcium silicate.
(b) Tolerance. 2 percent and 5 percent.
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used at levels not exceeding 2 percent in table salt and 5 percent in baking powder in accordance with good manufacturing or feeding practice.

§ 582.2437 Magnesium silicate.
(a) Product. Magnesium silicate.
(b) Tolerance. 2 percent.
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in table salt in accordance with good manufacturing or feeding practice.

§ 582.2727 Sodium aluminosilicate.
(a) Product. Sodium aluminosilicate (sodium silicoaluminate).
(b) Tolerance. This substance is generally recognized as safe for use at a level not exceeding 2 percent in accordance with good manufacturing or feeding practice.

§ 582.2729 Hydrated sodium calcium aluminosilicate.
(a) Product. Hydrated sodium calcium aluminosilicate (sodium calcium silicoaluminate).
(b) Tolerance. This substance is generally recognized as safe for use at a level not exceeding 2 percent in accordance with good manufacturing or feeding practice.

§ 582.2906 Tricalcium silicate.
(a) Product. Tricalcium silicate.
(b) Tolerance. 2 percent.
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in table salt in accordance with good manufacturing or feeding practice.

§ 582.3013 Ascorbic acid.
(a) Product. Ascorbic acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3021 Benzoic acid.
(a) Product. Benzoic acid.
(b) Tolerance. This substance is generally recognized as safe for use at a level not exceeding 0.1 percent in accordance with good manufacturing or feeding practice.

§ 582.3041 Erythorbic acid.
(a) Product. Erythorbic acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3081 Propionic acid.
(a) Product. Propionic acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3089 Sorbic acid.
(a) Product. Sorbic acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3109 Thiodipropionic acid.
(a) Product. Thiodipropionic acid.
(b) Tolerance. This substance is generally recognized as safe for use in food when the total content of antioxidants is not over 0.02 percent of fat or oil content including essential (volatile) oil content of the food, provided the substance is used in accordance with good manufacturing or feeding practice.

§ 582.3149 Ascorbyl palmitate.
(a) Product. Ascorbyl palmitate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3169 Butylated hydroxyanisole.
(a) Product. Butylated hydroxyanisole.
(b) Tolerance. This substance is generally recognized as safe for use in food when the total content of antioxidants is not over 0.02 percent of fat or oil content, including essential (volatile) oil content of food provided the substance is used in accordance with good manufacturing or feeding practice.
§ 582.3173 Butylated hydroxytoluene.
(a) Product. Butylated hydroxytoluene.
(b) Tolerance. This substance is generally recognized as safe for use in food when the total content of antioxidants is not over 0.02 percent of fat or oil content, including essential (volatile) oil content of the food, provided the substance is used in accordance with good manufacturing or feeding practice.

§ 582.3189 Calcium ascorbate.
(a) Product. Calcium ascorbate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3221 Calcium propionate.
(a) Product. Calcium propionate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3225 Calcium sorbate.
(a) Product. Calcium sorbate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3280 Dilauryl thiodipropionate.
(a) Product. Dilauryl thiodipropionate.
(b) Tolerance. This substance is generally recognized as safe for use in food when the total content of antioxidants is not over 0.02 percent of fat or oil content, including essential (volatile) oil content of the food, provided the substance is used in accordance with good manufacturing or feeding practice.

§ 582.3336 Gum guaiac.
(a) Product. Gum guaiac.
(b) Tolerance. 0.1 percent (equivalent antioxidant activity 0.01 percent).
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in edible fats or oils in accordance with good manufacturing or feeding practice.

§ 582.3490 Methylparaben.
(a) Product. Methylparaben (methyl p-hydroxybenzoate).
(b) Tolerance. This substance is generally recognized as safe for use at a level not exceeding 0.1 percent in accordance with good manufacturing or feeding practice.

§ 582.3616 Potassium bisulfite.
(a) Product. Potassium bisulfite.
(b) [Reserved]
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice, except that it is not used in meats or in food recognized as source of vitamin B1.

§ 582.3637 Potassium metabisulfite.
(a) Product. Potassium metabisulfite.
(b) [Reserved]
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice, except that it is not used in meats or in food recognized as source of vitamin B1.

§ 582.3640 Potassium sorbate.
(a) Product. Potassium sorbate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3660 Propyl gallate.
(a) Product. Propyl gallate.
(b) Tolerance. This substance is generally recognized as safe for use in food when the total content of antioxidants is not over 0.02 percent of fat or oil content, including essential (volatile) oil content of the food, provided the substance is used in accordance with good manufacturing or feeding practice.

§ 582.3670 Propylparaben.
(a) Product. Propylparaben (propyl p-hydroxybenzoate).
(b) Tolerance. This substance is generally recognized as safe for use at a level not exceeding 0.1 percent in accordance with good manufacturing or feeding practice.
§ 582.3731 Sodium ascorbate. 
(a) Product. Sodium ascorbate. 
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3733 Sodium benzoate. 
(a) Product. Sodium benzoate. 
(b) Tolerance. This substance is generally recognized as safe for use at a level not exceeding 0.1 percent in accordance with good manufacturing or feeding practice.

§ 582.3739 Sodium bisulfite. 
(a) Product. Sodium bisulfite. 
(b) [Reserved] 
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice, except that it is not used in meats or in food recognized as source of vitamin B₁.

§ 582.3766 Sodium metabisulfite. 
(a) Product. Sodium metabisulfite. 
(b) [Reserved] 
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice, except that it is not used in meats or in food recognized as source of vitamin B₁.

§ 582.3784 Sodium propionate. 
(a) Product. Sodium propionate. 
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3795 Sodium sorbate. 
(a) Product. Sodium sorbate. 
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.3798 Sodium sulfite. 
(a) Product. Sodium sulfite. 
(b) [Reserved] 
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice, except that it is not used in meats or in food recognized as source of vitamin B₁.

§ 582.3845 Stannous chloride. 
(a) Product. Stannous chloride. 
(b) Tolerance. This substance is generally recognized as safe for use at a level not exceeding 0.0015 percent calculated as tin in accordance with good manufacturing or feeding practice.

§ 582.3862 Sulfur dioxide. 
(a) Product. Sulfur dioxide. 
(b) [Reserved] 
(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice, except that it is not used in meats or in food recognized as source of vitamin B₁.

§ 582.3890 Tocopherols. 
(a) Product. Tocopherols. 
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

Subpart E—Emulsifying Agents

§ 582.4101 Diacetyl tartaric acid esters of mono- and diglycerides of edible fats or oils, or edible fat-forming fatty acids. 
(a) Product. Diacetyl tartaric acid esters of mono- and diglycerides of edible fats or oils, or edible fat-forming fatty acids. 
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.4505 Mono- and diglycerides of edible fats or oils, or edible fat-forming acids. 
(a) Product. Mono- and diglycerides of edible fats or oils, or edible fat-forming acids. 
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.
§ 582.4521 Monosodium phosphate derivatives of mono- and diglycerides of edible fats or oils, or edible fat-forming fatty acids.

(a) Product. Monosodium phosphate derivatives of mono- and diglycerides of edible fats or oils, or edible fat-forming fatty acids.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.4666 Propylene glycol.

(a) Product. Propylene glycol.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

Subpart F—Nutrients and/or Dietary Supplements

§ 582.5013 Ascorbic acid.

(a) Product. Ascorbic acid.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5017 Aspartic acid.

(a) Product. Aspartic acid (L- and DL-forms).

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5049 Aminoacetic acid.

(a) Product. Glycine (aminoacetic acid).

(b) [Reserved]

(c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in animal feeds in accordance with good manufacturing or feeding practice.

§ 582.5065 Linoleic acid.

(a) Product. Linoleic acid prepared from edible fats and oils and free from chick-edema factor.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5118 Alanine.

(a) Product. Alanine (L- and DL-forms).

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5145 Arginine.

(a) Product. Arginine (L- and DL-forms).

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5159 Biotin.

(a) Product. Biotin.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5191 Calcium carbonate.

(a) Product. Calcium carbonate.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5195 Calcium citrate.

(a) Product. Calcium citrate.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5201 Calcium glycerophosphate.

(a) Product. Calcium glycerophosphate.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5210 Calcium oxide.

(a) Product. Calcium oxide.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5212 Calcium pantothenate.

(a) Product. Calcium pantothenate.

1Amino acids listed in this subpart may be free hydrochloride salt, hydrated, or anhydrous form, where applicable.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5217 Calcium phosphate.
(a) Product. Calcium phosphate (mono-, di-, and tribasic).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5223 Calcium pyrophosphate.
(a) Product. Calcium pyrophosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5230 Calcium sulfate.
(a) Product. Calcium sulfate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5245 Carotene.
(a) Product. Carotene.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5250 Choline bitartrate.
(a) Product. Choline bitartrate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5252 Choline chloride.
(a) Product. Choline chloride.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5260 Copper gluconate.
(a) Product. Copper gluconate.
(b) Tolerance. This substance is generally recognized as safe for use at a level not exceeding 0.005 percent in accordance with good manufacturing or feeding practice.

§ 582.5271 Cysteine.
(a) Product. Cysteine (L-forms).

§ 582.5273 Cystine.
(a) Product. Cystine (L- and DL-forms).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5301 Ferric phosphate.
(a) Product. Ferric phosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5304 Ferric pyrophosphate.
(a) Product. Ferric pyrophosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5306 Ferric sodium pyrophosphate.
(a) Product. Ferric sodium pyrophosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5308 Ferrous gluconate.
(a) Product. Ferrous gluconate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5311 Ferrous lactate.
(a) Product. Ferrous lactate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5315 Ferrous sulfate.
(a) Product. Ferrous sulfate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.
§ 582.5361 Histidine.
(a) Product. Histidine (L- and DL-forms).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5370 Inositol.
(a) Product. Inositol.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5375 Iron reduced.
(a) Product. Iron reduced.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5381 Isoleucine.
(a) Product. Isoleucine (L- and DL-forms).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5406 Leucine.
(a) Product. Leucine (L- and DL-forms).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5411 Lysine.
(a) Product. Lysine (L- and DL-forms).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5431 Magnesium oxide.
(a) Product. Magnesium oxide.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5434 Magnesium phosphate.
(a) Product. Magnesium phosphate (di- and tribasic).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5443 Magnesium sulfate.
(a) Product. Magnesium sulfate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5446 Manganese chloride.
(a) Product. Manganese chloride.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5449 Manganese citrate.
(a) Product. Manganese citrate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5452 Manganese gluconate.
(a) Product. Manganese gluconate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5455 Manganese glycerophosphate.
(a) Product. Manganese glycerophosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5458 Manganese hypophosphite.
(a) Product. Manganese hypophosphite.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5461 Manganese sulfate.
(a) Product. Manganese sulfate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5464 Manganous oxide.
(a) Product. Manganous oxide.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.
used in accordance with good manufacturing or feeding practice.

§ 582.5470 Mannitol.
   (a) Product. Mannitol.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5475 Methionine.
   (a) Product. Methionine.
   (b) [Reserved]
   (c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in animal feeds in accordance with good manufacturing or feeding practice.

§ 582.5477 Methionine hydroxy analog and its calcium salts.
   (a) Product. Methionine hydroxy analog and its calcium salts.
   (b) [Reserved]
   (c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in animal feeds in accordance with good manufacturing or feeding practice.

§ 582.5530 Niacin.
   (a) Product. Niacin.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5535 Niacinamide.
   (a) Product. Niacinamide.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5580 D-Pantothenyl alcohol.
   (a) Product. D-Pantothenyl alcohol.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5590 Phenylalanine.
   (a) Product. Phenylalanine (L- and DL-forms).
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5622 Potassium chloride.
   (a) Product. Potassium chloride.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5628 Potassium glycerophosphate.
   (a) Product. Potassium glycerophosphate.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5634 Potassium iodide.
   (a) Product. Potassium iodide.
   (b) Tolerance. 0.01 percent.
   (c) Limitations, restrictions, or explanation. This substance is generally recognized as safe when used in table salt as a source of dietary iodine in accordance with good manufacturing or feeding practice.

§ 582.5650 Proline.
   (a) Product. Proline (L- and DL-forms).
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5676 Pyridoxine hydrochloride.
   (a) Product. Pyridoxine hydrochloride.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5695 Riboflavin.
   (a) Product. Riboflavin.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5697 Riboflavin-5-phosphate.
   (a) Product. Riboflavin-5-phosphate.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5701 Serine.
   (a) Product. Serine (L- and DL-forms).
§ 582.5772 Sodium pantothenate.
   (a) Product. Sodium pantothenate.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5778 Sodium phosphate.
   (a) Product. Sodium phosphate (mono-, di-, and tribasic).
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5835 Sorbitol.
   (a) Product. Sorbitol.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5875 Thiamine hydrochloride.
   (a) Product. Thiamine hydrochloride.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5878 Thiamine mononitrate.
   (a) Product. Thiamine mononitrate.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5881 Threonine.
   (a) Product. Threonine (L- and DL-forms).
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5890 Tocopherols.
   (a) Product. Tocopherols.
   (b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5892 a-Tocopherol acetate.
   (a) Product. a-Tocopherol acetate.
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§ 582.5950 Vitamin D₂.
(a) Product. Vitamin D₂.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5953 Vitamin D₃.
(a) Product. Vitamin D₃.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5985 Zinc chloride.
(a) Product. Zinc chloride.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5988 Zinc gluconate.
(a) Product. Zinc gluconate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5991 Zinc oxide.
(a) Product. Zinc oxide.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5994 Zinc stearate.
(a) Product. Zinc stearate prepared from stearic acid free from chick-edema factor.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.5997 Zinc sulfate.
(a) Product. Zinc sulfate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

Subpart G—Sequestrants

§ 582.6033 Citric acid.
(a) Product. Citric acid.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6085 Sodium acid phosphate.
(a) Product. Sodium acid phosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6099 Tartaric acid.
(a) Product. Tartaric acid.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6185 Calcium acetate.
(a) Product. Calcium acetate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6193 Calcium chloride.
(a) Product. Calcium chloride.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6195 Calcium citrate.
(a) Product. Calcium citrate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6197 Calcium diacetate.
(a) Product. Calcium diacetate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6199 Calcium gluconate.
(a) Product. Calcium gluconate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

For the purpose of this subpart, no attempt has been made to designate those sequestrants that may also function as chemical preservatives.
§ 582.6203 Calcium hexametaphosphate.
(a) Product. Calcium hexametaphosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6215 Monobasic calcium phosphate.
(a) Product. Monobasic calcium phosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6219 Calcium phytate.
(a) Product. Calcium phytate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6285 Dipotassium phosphate.
(a) Product. Dipotassium phosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6290 Disodium phosphate.
(a) Product. Disodium phosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6386 Isopropyl citrate.
(a) Product. Isopropyl citrate.
(b) Tolerance. This substance is generally recognized as safe for use at a level not exceeding 0.02 percent in accordance with good manufacturing or feeding practice.

§ 582.6511 Monoisopropyl citrate.
(a) Product. Monoisopropyl citrate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6625 Potassium citrate.
(a) Product. Potassium citrate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6751 Sodium citrate.
(a) Product. Sodium citrate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6754 Sodium diacetate.
(a) Product. Sodium diacetate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6757 Sodium gluconate.
(a) Product. Sodium gluconate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6760 Sodium hexametaphosphate.
(a) Product. Sodium hexametaphosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6769 Sodium metaphosphate.
(a) Product. Sodium metaphosphate.
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6778 Sodium phosphate.
(a) Product. Sodium phosphate (mono-, di-, and tribasic).
(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.6787 Sodium pyrophosphate.
(a) Product. Sodium pyrophosphate.
(b) Condition of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.
§ 582.6789 Tetra sodium pyrophosphate.
  (a) Product. Tetra sodium pyrophosphate.
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.6801 Sodium tartrate.
  (a) Product. Sodium tartrate.
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.6804 Sodium potassium tartrate.
  (a) Product. Sodium potassium tartrate.
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.6807 Sodium thiosulfate.
  (a) Product. Sodium thiosulfate.
  (b) Tolerance. 0.1 percent.
  (c) Limitations, restrictions, or explanation. This substance is generally rec-
  ognized as safe when used in salt in accordance with good manufacturing or
  feeding practice.

§ 582.6810 Sodium tripolyphosphate.
  (a) Product. Sodium tripolyphosphate.
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.6851 Stearyl citrate.
  (a) Product. Stearyl citrate.
  (b) Tolerance. This substance is generally recognized as safe for use at a
  level not exceeding 0.15 percent in accordance with good manufacturing or
  feeding practice.

Subpart H—Stabilizers

§ 582.7115 Agar-agar.
  (a) Product. Agar-agar.
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.7133 Ammonium alginate.
  (a) Product. Ammonium alginate.
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.7187 Calcium alginate.
  (a) Product. Calcium alginate.
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.7255 Chondrus extract.
  (a) Product. Chondrus extract (carrageenin).
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.7330 Gum arabic.
  (a) Product. Acacia (gum arabic).
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.7333 Gum ghatti.
  (a) Product. Gum ghatti.
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.7339 Guar gum.
  (a) Product. Guar gum.
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.7343 Locust bean gum.
  (a) Product. Locust (carob) bean gum.
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.

§ 582.7349 Sterculia gum.
  (a) Product. Sterculia gum (karaya gum).
  (b) Conditions of use. This substance is generally recognized as safe when
  used in accordance with good manufacturing or feeding practice.
§ 582.7351 Gum tragacanth.

(a) Product. Tragacanth (gum tragacanth).

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.7610 Potassium alginate.

(a) Product. Potassium alginate.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

§ 582.7724 Sodium alginate.

(a) Product. Sodium alginate.

(b) Conditions of use. This substance is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

PART 584—FOOD SUBSTANCES AFFIRMED AS GENERALLY RECOGNIZED AS SAFE IN FEED AND DRINKING WATER OF ANIMALS

Subpart A [Reserved]

Subpart B—Listing of Specific Substances Affirmed as GRAS

Sec.
584.200 Ethyl alcohol containing ethyl acetate.
584.700 Hydrophobic silicas.


Subpart A [Reserved]

Subpart B—Listing of Specific Substances Affirmed as GRAS

§ 584.200 Ethyl alcohol containing ethyl acetate.

The feed additive ethyl alcohol containing ethyl acetate meets the requirement of 27 CFR 212.45, being not less than 92.5 percent ethyl alcohol, each 100 gallons having had added the equivalent of 4.25 gallons of 100 percent ethyl acetate. It is used in accordance with good feeding practices in ruminant feed supplements as a source of added energy.

[56 FR 52333, Oct. 27, 1991]

§ 584.700 Hydrophobic silicas.

(a) Product. Amorphous fumed hydrophobic silica or precipitated hydrophobic silica (CAS Reg. No. 68611-09-4; silane, dichlorodimethyl-, reaction products with silica).

(b) Conditions of use. An anticaking/free-flow agent in vitamin preparations for animal feed.

(c) Limitations. Not to exceed 5 percent in the vitamin preparation. It shall be used in accordance with good manufacturing or feeding practices. It must be of purity suitable for intended use, and it must comply with the following specifications:

(i) Amorphous fumed hydrophobic silica: Not less than 99.0 percent silicon dioxide after ignition. Not more than 3 ppm arsenic. Not more than 0.003 percent heavy metals (as lead). Not more than 10 ppm lead. Not more than 2.5 percent loss on drying. Not more than 2 percent loss on ignition after drying. Not more than 1 percent insoluble substances. Not more than 50 parts per million dichlorodimethylsilane.

(ii) Precipitated hydrophobic silica: Not less than 94.0 percent silicon dioxide after ignition. Not more than 3 ppm arsenic. Not more than 0.003 percent heavy metals (as lead). Not more than 10 ppm lead. Not more than 7 percent loss on drying. Not more than 8.5 percent loss on ignition after drying. Not more than 5 percent soluble ionizable salts (as sodium sulfate). Not more than 1 percent insoluble substances. Not more than 50 parts per million dichlorodimethylsilane.

[61 FR 43453, Aug. 23, 1996]