PMI® Alcohol Rodent Liquid Diet
LD 102A*
Technical Data

**DESCRIPTION**
Diet LD 102A is a dry powder used to prepare a liquid diet for rodents in alcohol studies. The powder is designed to be mixed with alcohol and carbohydrates (maltodextrin) prior to feeding. When mixed according to instructions, it provides a similar level of nutrition as LD 102.

**Features and Benefits**
- Nutrient-balanced
- Volatiles added
- Stabilized against microbial growth
- Minimal foaming
- Provides stable nutrients
- Shipped in dry form to simplify storage, shipping and stability
- Easily prepared
- Nutritionally-balanced
- Somewhat similar to Low Protein High Fat Diet
- Carbohydrates (maltodextrin) prior to feeding. When mixed according to directions, provides 1000 kilocalories (1 kcal per gram).

**GUARANTEED ANALYSIS**
Crude protein not less than 26.0% Crude fat not less than 24.5% Ash not more than 2.8%

**Diet Preparation Instructions:** To the appropriate grams of water indicated in the chart, add 140 gms. Micro-Stabilized Alcohol Rodent Liquid Diet mix (LD 102A) and Maltodextrin. Blend vigorously for 15-30 seconds with a mechanical blender until completely suspended. For best results add water to blender before dry mix.

**Additional Considerations:**
- For best results a mechanical blender should be used for diet preparation; hand blending does not suspend the diet adequately to avoid some settling out of undissolved ingredients.
- Do not over-blend; excessive mechanical blending creates foaming.

**INGREDIENTS**
Vitamin-free casein, olive oil, maltodextrin, dried corn syrup, soy flour, corn oil, suspension colloid, safflower oil, L-cysteine, DL-methionine, vitamin A acetate, cholecalciferol, dl-alpha tocopherol acetate, menadione dimethylpyrimidinol bismuth (source of vitamin K), ascorbic acid, cyanocobalamin, thiamin mononitrate, riboflavin, calcium pantothenate, nicotinic acid, choline chloride, pyridoxine hydrochloride, folic acid, biotin, p-aminobenzoic acid, inositol, p-aminobenzoic acid, choline, calcium carbonate, calcium phosphate, potassium phosphate, sodium phosphate, magnesium sulfate, sodium chloride, manganese sulfate, ferrous fumarate, zinc chloride, cupric sulfate, chromium chloride, sodium fluoride, ammonium molybdate, calcium iodate, sodium selenite.

**FEEDING DIRECTIONS**
Diet consumption will vary according to animal size and sex. An average rat should consume about 74-109 grams of liquid diet (17-25 grams dry diet) daily. The growth rate of rats maintained on this diet should be similar to that attained by young rats (55-100 grams) maintained on a good quality, nonpurified rodent diet. Mice should consume at least 20 grams per day for the first 4 days and then increase their consumption. Prior to feeding, mices should be given an opportunity to eat and drink in the new environment. If the diet is not acceptable, the animal should be given an opportunity to eat and drink in the new environment.

**Product Forms Available**
- Dry Powder 7554 (57UP)
- Catalog #

**CHEMICAL COMPOSITION**

<table>
<thead>
<tr>
<th>Nutrients</th>
<th>Reconstituted Powder</th>
<th>Dry Powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein, %</td>
<td>4.06</td>
<td>29.2</td>
</tr>
<tr>
<td>Arginine, %</td>
<td>0.16</td>
<td>1.16</td>
</tr>
<tr>
<td>Cystine, %</td>
<td>0.49</td>
<td></td>
</tr>
<tr>
<td>Glycine, %</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td>Histidine, %</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>Isoleucine, %</td>
<td>1.55</td>
<td></td>
</tr>
<tr>
<td>Leucine, %</td>
<td>2.82</td>
<td></td>
</tr>
<tr>
<td>Lysine, %</td>
<td>2.35</td>
<td></td>
</tr>
<tr>
<td>Methionine, %</td>
<td>1.05</td>
<td></td>
</tr>
<tr>
<td>Phenylalanine, %</td>
<td>1.56</td>
<td></td>
</tr>
<tr>
<td>Tyrosine, %</td>
<td>1.63</td>
<td></td>
</tr>
<tr>
<td>Threonine, %</td>
<td>1.27</td>
<td></td>
</tr>
<tr>
<td>Tryptophan, %</td>
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<tr>
<td>Valine, %</td>
<td>1.86</td>
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<tr>
<td>Aspartic Acid, %</td>
<td>2.12</td>
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<tr>
<td>Glutamic Acid, %</td>
<td>6.59</td>
<td></td>
</tr>
<tr>
<td>Fat (ether extract), %</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>Fiber (Crude), %</td>
<td>5.0</td>
<td></td>
</tr>
</tbody>
</table>

**Minerals**
- Calcium, %: 0.14 (0.98)
- Phosphorus, %: 0.11 (0.78)
- Potassium, %: 0.10 (0.69)
- Magnesium, %: 0.03 (0.19)
- Sulfur, %: 0.05 (0.39)
- Sodium, %: 0.05 (0.39)
- Chloride, %: 0.05 (0.39)
- Fluorine, ppm: 0.25 (1.8)
- Iron, ppm: 0.18 (1.30)
- Zinc, ppm: 0.12 (1.13)
- Manganese, ppm: 0.14 (0.99)
- Copper, ppm: 0.24 (1.7)
- Chromium, ppm: 0.05 (0.35)
- Molybdenum, ppm: 0.11 (0.80)
- Selenium, ppm: 0.02 (0.11)

**Vitamins**
- Vitamin K (as menadione), ppm: 0.25 (1.8)
- Thiamin, ppm: 1.5 (11)

**Chemical Composition**

*Energy Levels used (kcal/gm)*
- Protein, kcal/kg: 1.73
- Fat, Kcal/kg: 0.350
- Carbohydrates, kcal/kg: 0.117

*Energy Levels used (kcal/gm)*
- Protein: 4.25; Fat: 9.00; Ethanol = 7.07. The protein value is different than the 4 kcal/gm for protein, as generally used.
- 1 kilogram of diet in liquid form, when prepared according to directions, provides 1000 kilocalories (1 kcal per gram).


**PMI® Alcohol Rodent Liquid Diet (LD 102A) Diet Preparation Chart**
Diet composition varies according to the amount of alcohol added to maintain an isocaloric diet. The following chart indicates the amount of water, PMI® Alcohol Rodent Liquid Diet LD 102A mix (Dry Mix), PMI® Maltodextrin LD 104, and ethanol to be used to make one kilogram of liquid diet.

<table>
<thead>
<tr>
<th>Calories from Ethanol gms</th>
<th>Water gms</th>
<th>dry mix gms</th>
<th>Maltodextrin gms</th>
<th>Ethanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>810.1</td>
<td>139</td>
<td>15</td>
<td>42.4</td>
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<tr>
<td>30</td>
<td>803.6</td>
<td>139</td>
<td>15</td>
<td>42.4</td>
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<td>20</td>
<td>792.7</td>
<td>139</td>
<td>40</td>
<td>28.3</td>
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<tr>
<td>10</td>
<td>781.9</td>
<td>139</td>
<td>65</td>
<td>14.1</td>
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<tr>
<td>0</td>
<td>771.0</td>
<td>139</td>
<td>90</td>
<td>0</td>
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</tbody>
</table>

For Calculation purposes:
- 139 gms. dry Alcohol Rodent Liquid Diet mix=645 kcal.
- Ethanol=7.1 kcal/gm
- *PMI® Maltodextrin LD 104=4.0 kcal/gm

For information regarding shelf life please visit [www.labdiet.com](http://www.labdiet.com).
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