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## TECHNICAL INFORMATION

Catalog Number: 960438, 960439, 960440, 960441

### Methionine/Choline Deficient and Control Diets

**Description:** Nonalcoholic steatohepatitis (NASH) is common liver injury in which the histopathological abnormalities mimic those of alcoholic steatohepatitis. This disorder is most frequently associated with type 2 diabetes, hyperlipidemia, and rapid weight loss.<sup>1</sup> Leclercq, et al. published in *The Journal of Clinical Investigation*, CYP2E1 and CYP4A as microsomal catalysts of lipid peroxides in murine nonalcoholic steatohepatitis, in which they proposed that CYP2E1 could also be a factor in the development of NASH. The mice used in this experiment were fed MP's plain Methionine/Choline and our control diet.

### References:

– Leclercq, I.A. (Storr Liver Unit, Department of Medicine and Westmead Millennium Institute, University of Sydney at Westmead Hospital, Westmead NSW 2145, Australia), Farrell, G.C. (Storr Liver Unit, Department of Medicine and Westmead Millennium Institute, University of Sydney at Westmead Hospital, Westmead NSW 2145, Australia), Field, J. (Storr Liver Unit, Department of Medicine and Westmead Millennium Institute, University of Sydney at Westmead Hospital, Westmead NSW 2145, Australia), Bell, D.R. (School of Biology, University of Nottingham, University Park, Nottingham NG7 2DR, United Kingdom), Gonzalez, F.J. (Laboratory of Molecular Carcinogenesis, National Cancer Institute, National Institutes of Health, Bethesda, Maryland 20892, USA) and Robertson, G.R. (Storr Liver Unit, Department of Medicine and Westmead Millennium Institute, University of Sydney at Westmead Hospital, Westmead NSW 2145, Australia), "CYP2E1 and CYP4A as microsomal catalysts of lipid peroxides in murine nonalcoholic steatohepatitis." *The Journal of Clinical Investigation*, v. **10(8)**, 1067-1075.

### Methionine/Choline Deficient Diet Composition:

<b>Ingredient</b>	<b>Amount (g/kg diet)</b>
Sucrose	455.3 gm
Corn Starch	200.0 gm
Corn Oil	100.0 gm
Alphacel Non-Nutritive Bulk	30.0 gm
AIN 76 Mineral Mix (composition below)	35.0 gm

(below is gm/kg of AIN 76 Mineral Mix)

Calcium Phosphate Dibasic	500.00 gm
Sodium Chloride	74.00 gm
Potassium Citrate Monohydrate	220.00 gm
Potassium Sulfate	52.00 gm

Magnesium Oxide	24.00 gm
Manganese Carbonate (43-48% Mn)	3.50 gm
Ferric Citrate (16-17% Fe)	6.00 gm
Zinc Carbonate (70% ZnO)	1.60 gm
Cupric Carbonate (53-55% Cu)	0.30 gm
Potassium Iodate	0.01 gm
Sodium Selenite	0.01 gm
Chromium Potassium Sulfate	0.55 gm
Sucrose, finely powdered	118.00 gm
Dicalcium Phosphate	3.0 gm
L-Alanine	3.5 gm
L-Arginine Hydrochloride	12.1 gm
L-Asparagine Monohydrate	6.0 gm
L-Aspartic Acid	3.5 gm
L-Cystine	3.5 gm
L-Glutamic Acid	40.0 gm
Glycine	23.3 gm
L-Histidine Hydrochloride	4.5 gm
L-Isoleucine	8.2 gm
L-Leucine	11.1 gm
L-Lysine Hydrochloride	18.0 gm
L-Phenylalanine	7.5 gm
L-Proline	3.5 gm
L-Serine	3.5 gm
L-Threonine	8.2 gm
L-Tryptophan	1.8 gm
L-Tyrosine	5.0 gm
L-Valine	8.2 gm
DL-alpha-Tocopherol Acetate (250 u/gm)	0.484 gm
Vitamin A Palmitate (250,000 u/gm)	0.0792 gm
Vitamin D3 (400,000 u/gm)	0.0055 gm
Ethoxyquin	0.02 gm
Vitamin Mix	0.0004 gm
Biotin	0.0661 gm
D-Calcium Pantothenate	0.002 gm
Folic Acid	

Inositol	0.1101 gm
Menadione	0.0496 gm
Niacin	0.0991 gm
p-Aminobenzoic Acid	0.1101 gm
Pyridoxine Hydrochloride	0.0220 gm
Riboflavin	0.022 gm
Thiamine Hydrochloride	0.022 gm
Vitamin B12 (0.1% trit.)	0.0297 gm
Ascorbic acid	1.0166 gm
Corn Starch	3.4503 gm

**Methionine/Choline Control Diet Composition:**

This diet has the same formulation as the Methionine/Choline Deficient diet except we add 2 g/kg choline chloride and 3 g/kg DL-Methionine at the expense of sucrose.

**Availability:**

<i>Catalog Number</i>	<i>Description</i>	<i>Sizes</i>
960438	Methionine/Choline Deficient Diet, powdered	10 kg 20 kg 50 kg
960439	Methionine/Choline Deficient Diet, Pelleted	10 kg 20 kg 50 kg
960440	Methionine/Choline Control Diet, powdered	10 kg 20 kg 50 kg
960441	Methionine/Choline Control Diet, Pelleted	10 kg 20 kg 50 kg