

TECHNICAL MONOGRAPH

PRODUCT NAME: LiverCLEANSE

CONSTITUENTS:	Common Name	Botanical Name
	De-glycyrrhizinated licorice (DGL)	<i>Glycyrrhiza species</i>
	Flaxseed	<i>Linus usitatissimum</i>
	Milk Thistle	<i>Silybum marianum</i>
	Peppermint	<i>Mentha X piperitae</i>
	Yeast, nutritional	<i>Saccharomyces cerevisiae</i>

INTENDED PURPOSE

LiverCLEANSE is based on the proven properties of silymarin and silybin used in drug and alcohol rehabilitation. Cleanse, strengthen and regenerate an overloaded liver. Helps to repair pharmacological damage and flush toxic residues. Ideal for routine detoxification.

EVIDENCE FOR EFFICACY

- **LICORICE (DEGLYCYRRHIZINATED LICORICE)** AQUEOUS EXTRACTS FROM THE ROOTS OF THE LICORICE PLANTS ARE WIDELY USED FOR TREATMENT OF STOMACH ULCER. THE EXTRACT CONTAINS SAPONINS THAT HAVE ANTI-INFLAMMATORY ACTIVITY AND THAT PREVENT THE ADHESION OF ULCER-CAUSING BACTERIA TO THE STOMACH LINING (WITTSCHIER ET AL. 2009).
- **LINUS USITATISSIMUM (FLAXSEED)** IS RICH IN OMEGA-3, OMEGA-6 OILS, ALPHA-LINOLEIC ACID, DIETARY FIBERS, SECOISOLARICRESINOL DIGLUCOSIDE, PROTEIN AND MINERALS. ITS HEALTH BENEFITS INCLUDE BEING AN ANTIOXIDANT AGENT, PREVENTIVES AGAINST CARDIOVASCULAR DISEASES, CANCER, DIABETES AND ENHANCEMENT OF SPATIAL MEMORY. **FLAXSEED** ALSO HAS DEMONSTRATED ANTI-INFLAMMATORY ACTIVITY WHEN FED TO HORSES FOR 70 DAYS (VINEYARD ET AL. 2010; AKHTAR ET AL. 2013).
- **MENTHA X PIPERITAE (PEPPERMINT) MINT** HAS LONG BEEN USED IN EVERY DAY LIFE IN VARIOUS FOOD ITEMS AS A FLAVOURING AGENT AND AS A MEDICINAL INGREDIENT. EXTRACTS FROM THE LEAVES HAVE SIGNIFICANT ANTIMICROBIAL AND ANTIVIRAL ACTIVITIES, STRONG ANTIOXIDANT ACTIONS, AND POTENTIAL TO ENHANCE IMMUNE SYSTEM FUNCTIONS (MCKAY AND BLUMBERG 2006; SHARAFI ET AL. 2010; AHMAD ET AL. 2012).
- **Silybum marianum** (milk thistle) is traditionally used as a treatment for liver damage, and its usefulness in treating liver conditions has been linked to the isolated compound “*silymarin*”. The plant is high in bioflavonoids and exhibits a pronounced antioxidant that offers protection to the liver, and may explain the plant’s use as an anti-ulcer treatment (de la Lastra et al. 1992, 1995; Borrelli and Izzo 2000; Hackett et al. 2013a, 2013b; Vargas-Mendoza et al. 2014). Silymarin has also inhibits laminar separation of hoof explants in vitro by an anti-inflammatory mechanism (Resisinger et al. 2014).
- **Saccharomyces cerevisiae** (nutritional yeast) is a probiotic that can be provided in high numbers as a live cell culture or as a dried product in the diet. Its benefits in horses and other animals include modifying intestinal flora in the

Saccharomyces cerevisiae (additional yeast) is a probiotic that can be provided in high numbers as a live cell culture or as a dried product in the diet. Its benefits in horses and other animals include modifying intestinal flora in the large intestine and hindgut to improve starch digestibility (Medina et al. 2002; Jouany et al. 2009). There is the potential for enzymes involved in plant cell wall digestion to be increased with repeated ingestion of this yeast, resulting in improved digestion of fiber in horses (Jouany et al. 2008; Mackenthun et al. 2013).

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