



## **Lycofibre®: A Nutritious and Sustainable Ingredient for Pet Food**

### **What is Lycofibre®?**

Lycofibre® is a unique nutritious and sustainable ingredient produced from tomato skins, the residual material left over after processing tomatoes for sauce, juice, or paste.

Lycofibre® contains essential amino acids, fatty acids, minerals to support pet health.

Lycofibre® is a rich source of lycopene, a unique heat stable bioactive antioxidant perfectly suited for petfood applications.

Lycofibre® provides both insoluble fiber and soluble fiber to support optimum gut health.

Lycofibre® is a natural alternative to synthetic red colorants.

Lycofibre® inclusion in dry and wet diets does not negatively impact palatability.

### **Lycofibre®: Antioxidant Support**

Lycofibre® is a rich source of bioactive compounds with antioxidant properties, such as lycopene, beta-carotenoids, tocopherols, polyphenols, and terpenes (Lu *et al.* 2022).

These bioactive compounds play a vital role in biological systems by delaying or inhibiting the oxidation of lipids or other molecules and thus counteracting oxidative damage that occur under stress (García Herrera *et al.* 2010)

Lycofibre® is particularly abundant in lycopene. Lycopene is an important bioactive molecule with anti-inflammatory, antioxidant, anti-atherogenic and cardio protective properties (Palozza *et al.* 2012; P *et al.* 2017; Mozos *et al.* 2018; Kilany *et al.* 2020). Tomato pomace inclusion in dry petfood diets as a source of lycopene has been associated with reduced anxiety modulating metabolites in diets supplemented with omega 3 fatty acids and prebiotic fibers (Ephraim *et al.* 2022)

The antioxidant properties of lycopene are unique in that they are enhanced through heat exposure during the cooking process and are

therefore well suited to the processing demands of wet and dry pet food.

### **Lycofibre®: Gut Health**

Fibers play an important role in companion animal nutrition both for nutritional and processing purposes and are widely used in extruded and wet diets. Lycofibre® is a source of soluble and insoluble fiber. The soluble fiber component of Lycofibre® provides prebiotic functionality to support intestinal health and reduce fecal odor whilst the insoluble fiber component provides bulk to assist with GI transit and gut motility and may be reduced to reduce energy density to assist with weight control. (de Godoy *et al.* 2013; Serao and Fahey 2013; Pilla and Suchodolski 2021; Finet *et al.* 2022).

### **Lycofibre®: A Natural Colorant**

Lycofibre® retains a natural red color due to its high carotenoid (lycopene) content and may be used as an alternative to synthetic colorants to improve visual appearance of pet food applications in addition to its functional benefits. (Castro *et al.* 2021)

### **Lycofibre®: Application rates**

Recommended Lycofibre® application rates for extruded diet 1- 2.5%\*

Recommended Lycofibre® application rates for wet diet 0.25 -1 %\*

\*Application rates are to be used as a guide only. Please discuss with the Kagome technical team,

#### References:

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The logo for KAGOME consists of the word "KAGOME" in a bold, red, sans-serif font. The letters are slightly rounded and have a white outline, giving it a three-dimensional appearance.

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