Mucins are a family of heavily glycosylated proteins, and are the main components of mucosa such as saliva, tear, gastric fluid or enteric fluid. Basic configuration of mucin are macromolecules linked ramiform sugar chain to peptide framework. The heterogeneous property of sugar chain makes them diverse; the molecule has various functions, such as specific molecular recognition. Some of the sugar chains recognize a specific protein derived from virus and bacteria. Mucins are positioned in mucosal barrier function in the gut, stopping the translocation of pathogens and toxins into blood vessel beyond the intestinal wall. We can provide this unique kit especially for functional food development and infection research.
Experimental Example

Effects of polyphenols administration on the intestinal barrier function in high-fat diet fed rats.

**Standard Curve**

Fluorescence (356,395 nm)

- Standard curve equation: $y = -0.3534x + 199.96x + 373.25$
- R² = 0.9992

N-acetylglucosamine (µg/ml)

**Fecal mucin**

Measurement Example

Dietary polyphenols derived from aronia, hascup and bilberry, markedly elevated the amount of fecal mucin. (n=5)

Prepare 5 experimental groups (6 rats per group)

1. Control ⇒ 4 weeks
2. ②③④⑤ High-Fat diet ⇒ 4 weeks

5 experimental groups (6 rats per group)

1. Control ⇒ 4 weeks
2. High-Fat diet ⇒ 4 weeks
3. High-Fat diet + Polyphenol A ⇒ 4 weeks
4. High-Fat diet + Polyphenol B ⇒ 4 weeks
5. High-Fat diet + Polyphenol C ⇒ 4 weeks

Measure three days worth of feces

Results

The polyphenol addition groups enhanced the amount of mucin as compared to High-Fat diet groups.

References


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