

# An experimental protocol to study the membrane digestion and absorption of glucose polymers using everted sacs of rat small intestine

## **Abstract**

Nutrition comprises different stages, including food intake, digestion, absorption, metabolism (anabolism and catabolism), and excretion. An in-depth understanding of the process of digestion and absorption is essential while studying nutrition. However, literature describing the experimental protocol for studying membrane digestion and absorption is lacking, as the procedure is challenging and requires costly apparatus to perform. In this study, we attempted to explain in detail the experimental protocol for observing the requirement of  $\text{Na}^+$  for glucose absorption and for observing the difference in membrane digestion and absorption of different glucose polymers. Consequently, we demonstrated that experiments using everted sacs of the small intestine can be used to observe the requirement of  $\text{Na}^+$  for glucose absorption and discuss differences in membrane digestion of different glucose polymers (i. e., glucose, maltose, and starch) based on the extent of polymerization.