



Feb 16, 2025

Whole Gut Transit Time, Fecal Water Content, and Fecal Output

 Forked from [Whole Gut Transit Time, Fecal Water Content, and Fecal Output](#)

DOI

<https://dx.doi.org/10.17504/protocols.io.3byl4wxd2vo5/v1>

Chelsie Steele¹, Yujie Fan¹

¹Caltech



Chelsie Steele

Caltech

Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account

OPEN  ACCESS



DOI: <https://dx.doi.org/10.17504/protocols.io.3byl4wxd2vo5/v1>

Protocol Citation: Chelsie Steele, Yujie Fan 2025. Whole Gut Transit Time, Fecal Water Content, and Fecal Output. **protocols.io** <https://dx.doi.org/10.17504/protocols.io.3byl4wxd2vo5/v1>

License: This is an open access protocol distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Protocol status: Working

We use this protocol and it's working



Created: January 07, 2025

Last Modified: February 16, 2025

Protocol Integer ID: 117841

Keywords: obtaining whole gut transit time, whole gut transit time, fecal output protocol, fecal water content

Funders Acknowledgements:

Aligning Science Across Parkinson's

Grant ID: ASAP-020495

Abstract

Protocol for obtaining whole gut transit time



Experiment Preparation

1d

- 1 6% (w/v) carmine red (Sigma-Aldrich, St. Louis, MO) with 0.5% methylcellulose (Sigma-Aldrich) was dissolved and autoclaved prior to use.

1d

Experiment

- 2 Mice were orally gavaged with 150 μ L of carmine red solution.
- 3 Following gavage, mice were single-housed with no bedding for the duration of the experiment, and animals were not fasted beforehand.
- 4 Over the 3 hours following gavage, the mice were checked hourly, the number of stools counted, and three stools per animal were collected in pre-weighed, 1.5 mL microcentrifuge tube.
- 5 Three hours after gavaging, each pellet collected was checked for the presence of carmine red, and the time of initial carmine red pellet expulsion was recorded as GI transit time.
- 6 If the mice did not have any carmine red present by three hours, their stool was checked every 15 minutes until presence of carmine red was seen and the time of initial carmine red pellet expulsion was recorded as GI transit time.

5m

5h

Sample Processing

12h

- 7 The mass of collected fecal pellets was determined, and pellets were left to dry in an 60 °C oven overnight before weighing the desiccated pellets and calculating the pellets' initial water content.

12h