1. ABOUT THE DATASET

------------

Title: Data used in the chapter ‘Investigating calcium bioavailability in oat-based milk alternatives with comparison to cow’s milk by measurement of uptake into Caco-2 cells”

Creator(s): Roisin McCarron, Stella Lignou, Ruan Elliott

Organisation: University of Reading

Rights-holder(s): University of Reading, University of Surrey

Publication Year: 2025

Description: This dataset contains data from Chapter 5 of Thesis. Obtained from experimental measurements of the concentration calcium within post-digested milk samples, and within cells post-incubation with such samples.

The data was obtained using an ICP-MS, and AAS.

Cite as: McCarron, Roisin, Lignou, Stella and Elliott, Ruan (2025): Data used in thesis chapter 5: Investigating calcium bioavailability in oat-based milk alternatives with comparison to cow’s milk by measurement of uptake into Caco-2 cells. University of Reading. Dataset. <https://doi.org/10.17864/1947.001422>

Contact: [s.lignou@reading.ac.uk](mailto:s.lignou@reading.ac.uk), [roisin\_mccarron@hotmail.co.uk](mailto:roisin_mccarron@hotmail.co.uk)

2. PROJECT AND FUNDING INFORMATION

------------

This work was funded by the Biotechnology and Biological Sciences Research Council (BBSRC) and Arla Foods through a UKRI BBSRC Food Biosystems Doctoral Training Partnership(DTP, grant number [BB/T008776/1](https://www.sciencedirect.com/science/article/pii/S2772753X25000231#gs0002).

3. CONTENTS

------------

Data processing and preparation activities

Data was collected in Excel files. Different tabs have been assigned for different measurements/figures.

File listing

Calcium\_Data\_chapter5.xlsx

Tabs:

**AAS post-digested milks:** Data set for figure 5.1 - showing calcium measured within post-digested milk samples

Sample - digested milk samples

Rep = new preparation of digested milk

mg/100ml: measured calcium by AAS, using formula to convert PPM to mg/100ml

**ICP-MS cells:** Data set for figure 5.3 - showing calcium ppm as measured by ICP-MS in post extraction diluted samples

Sample: calcium measured in cells incubated with calcium free media, calcium control, or digested milk samples

Rep: full experimental rep; new preparation of digested milk, individual incubation, and preparation of samples run through ICP-MS

ppm: ppm calcium measured by ICP-MS in each sample

4. METHODS

--------------------------

Please see Materials and Methods section in the related chapter (chapter 5).

5. Copyright 2025, University of Reading and University of Surrey. This dataset is licensed under a Creative Commons Attribution 4.0 International Licence: <https://creativecommons.org/licenses/by/4.0/>.