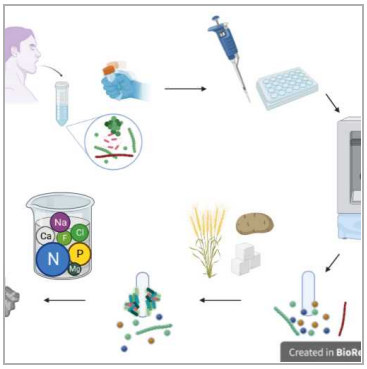

MAY 05, 2023

OPEN ACCESS

DOI:
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Protocol status: Working
We use this collection and it's working

Created: Dec 09, 2022

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Keywords: dental calculus, oral biofilm model, starch, alpha-amylase

FILES

Build your own calculus

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ABSTRACT

This collection contains protocols for growing a calcifying oral biofilm model. Protocols include artificial saliva, a mineralising solution (CPMU), an alpha-amylase activity assay, and a biofilm growth protocol with starch treatments.

The purpose of these protocols is to explore fundamental aspects of using dental calculus to infer dietary patterns in past populations. The main protocol contains starch treatments to look at the incorporation and extraction of starch granules from dental calculus, but can also be used to look at other dietary components, such as various proteins, other plant extracts, and whatever else may have been consumed in the past.

Protocols are modified protocols from Sissons et al. (1991) and Extercate et al. (2010)

IMAGE ATTRIBUTION

Image created by Bjørn Peare Bartholdy using BioRender.com

GUIDELINES

The protocols should be conducted in a sterile environment to avoid contamination of the biofilm with external contaminants.

If starch is used for treatments, it is important to work in a starch-free lab and include control samples in each plate to test for external contamination and cross-contamination between wells.

Protocol

NAME

Artificial saliva

VERSION 1

CREATED BY

Bjørn Peare Bartholdy Delft University of Technology

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Protocol

NAME

CPMU

VERSION 1

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Bjørn Peare Bartholdy Delft University of Technology

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Protocol

NAME

Biofilm growth with starch treatment

VERSION 2

CREATED BY

Bjørn Peare Bartholdy Delft University of Technology

OPEN →

Protocol

NAME

Amylase activity

VERSION 1

CREATED BY

Bjørn Peare Bartholdy Delft University of Technology

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Protocol

NAME

Artificial saliva

VERSION 2

CREATED BY

Bjørn Peare Bartholdy Delft University of Technology

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Protocol

NAME

CPMU

VERSION 2

CREATED BY

Bjørn Peare Bartholdy Delft University of Technology

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