

(SD2021-262) A wearable tool for colorimetric monitoring of proteases

Tech ID: 32630 / UC Case 2021-Z08-1

BACKGROUND

Facemasks in congregate settings prevent the transmission of SARS-CoV-2 and help control the ongoing COVID-19 global pandemic because face coverings can arrest transmission of respiratory droplets. While many groups have studied face coverings as personal protective equipment, these respiratory droplets can also serve as a diagnostic fluid to report on health state; surprisingly, studies of face coverings from this perspective are quite limited.

TECHNOLOGY DESCRIPTION

Researchers from UC San Diego developed a technology to measure the concentration and distribution of aerosolized saliva (via α -amylase levels) captured on various face coverings. The technology is a sticker than accumulates enzymes or proteases and then detects them via a color change. This uses a sticker on a face mask for monitoring of disease.

CONTACT

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OTHER INFORMATION

KEYWORDS

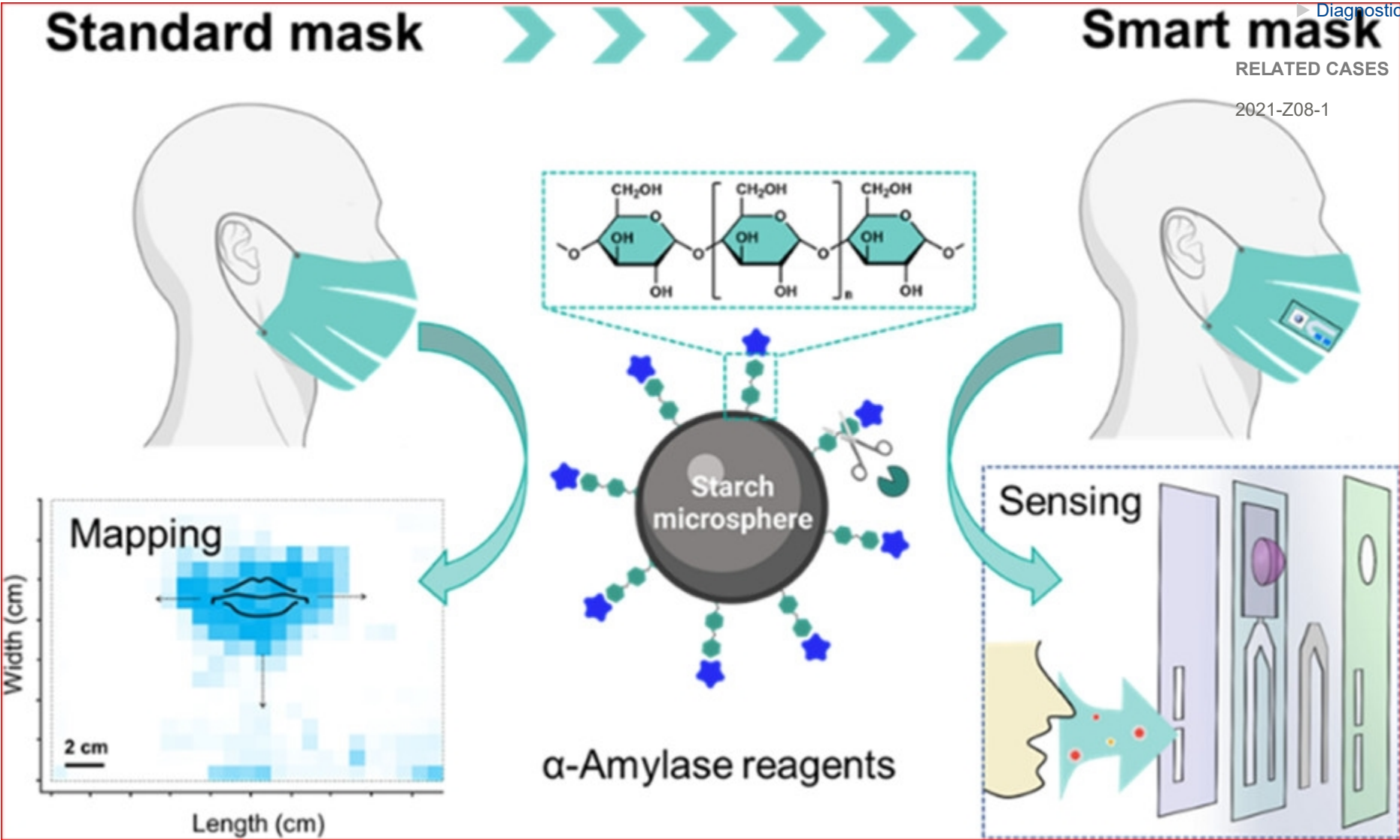
COVID, SARS, detection, biomarker, protease, surveillance

CATEGORIZED AS

- **Biotechnology**
- Health
- **Medical**
- Diagnostics

RELATED CASES

2021-Z08-1



APPLICATIONS

Face coverings are promising platforms for biofluid collection and colorimetric biosensing, which bode well for developing surveillance tools for airborne diseases.

INTELLECTUAL PROPERTY INFO

Patent-pending technology available for commercialization. Please contact UC San Diego for licensing terms.

RELATED MATERIALS

- ▶ [Jin Z, Jorns A, Yim W, Wing R, Mantri Y, Zhou J, Zhou J, Wu Z, Moore C, Penny WF, Jokerst JV. Mapping Aerosolized Saliva on Face Coverings for Biosensing Applications. Anal Chem. 2021 Aug 10;93\(31\):11025-11032. - 07/26/2021](#)
- ▶ [Researchers developing face mask sticker that can detect COVID-19 in droplets. - 01/22/2021](#)

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