

# Dentistry & Oral Care

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## Effect of Benzylisothiocyanate on acid production of salivary sediment

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Benzylisothiocyanate (BIT) is an aromatic compound extracted from the root of *Salvadora Persica L.* It has been found to have antibacterial effect against certain microorganisms. Salivary supernatant has buffering capacity that helps to reduce acid production and hence enamel demineralization. The effect of BIT on acid production by salivary sediment was investigated in the presence and absence of salivary supernatant. Six experiments were prepared as the following: (1) suspended salivary sediment (SSS) system (16.7%) (Negative control), (2) glucose (positive control) (5%), (3) glucose and 100mg/ml BIT, (4) salivary supernatant (33.3%), (5) salivary supernatant with glucose, (6) salivary supernatant glucose and 100mg/ml BIT. Incubation was done in a water bath at 37°C and pH was monitored at 15-minute intervals for a period of one hour. BIT at a concentration of 100g/ml had a slight inhibitory effect on acid production by SSS system. When the supernatant was added to the incubation mixture, a dramatic inhibitory effect on acid production was found. An additive effect on acid production inhibition was shown when both BIT and supernatant were added to the incubation mixture. The inhibitory action of BIT on acid production was almost the same in the absence and presence of supernatant. In conclusion, BIT like hypothiocyanate inhibits acid production by oral flora. In addition, BIT and salivary supernatant have an additive effect in preventing pH fall which helps to prevent enamel demineralization.

### Biography

Sara M Al Gahtani is a dentist and a faculty member at King Saud University. She earned her Doctor of Dental Surgery (DDS) Bachelor Degree with honor in 2013. Since the beginning of 2014, she has been working as a teaching assistant at the division of Oral Microbiology in Oral Medicine and Diagnostic Sciences department at College of Dentistry, King Saud University. She contributes in teaching undergraduate courses on medical and oral microbiology to students of the dental baccalaureate program.

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