Leucaena Leaves: An Oyster adjective
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Abstract: Amylase in leucaena leaves was an expected enzyme for the function of glycogen digestion whenever a Crassostrea belcheri oyster is chewed with leucaena leaves. Nutritive values of C. belcheri oyster and leucaena leaves were determined by chromatographic method. The amylase enzyme was confirmed preliminarily by agar well diffusion and quantitatively by dinitrosalicylic acid (DNS) method. Strong sweetness produced in a mixture of oyster, leucaena leaves and lime juice was experimentally proved as occurring while chewing truly. It was found that both leucaena leaves and C. belcheri oyster are plentiful of essential amino acids such as histidine (141.51±1.80; 363.38±1.05 mg/100 g), isoleucine (158.45±0.12; 213.55±1.75 mg/100 g), leucine (339.04±0.98; 527.75±1.71 mg/100 g), lysine (298.45±2.50; 479.06±2.75 mg/100 g), methionine (53.55±0.77; 251.95±0.45 mg/100 g), threonine (258.37±0.93; 337.87±1.50 mg/100 g), tryptophan (116.08±2.47; 127.11±0.25 mg/100 g), valine (218.58±0.12; 259.21±0.25 mg/100 g). The clear zone where starch is absent at pH 5.5 and 50°C of reaction temperature indicated the amylase enzyme present in leucaena leaves. Also, it contained 12.77 U/ml of the amylase enzyme where was much higher than that in human saliva (2.77 U/L) about five thousand times. Glucose obtained in absence and presence of the amylase enzyme was chromatographically detected in comparison of four different trials of the given mixture (oyster flesh, lime juice and leucaena leaves). Compared to only the oyster, the content of glucose was increased significantly in the mixture of oyster and leucaena leaves with and without lime juice. Also, the additional amylase enzyme showed a significant increase of glucose content. This might be due to lime juice that can stimulate salivary glands and increase rate of salivation about eight times. Studies indicated the presence of the amylase-containing leucaena leaves is a key role in enhancing sweetness of eating with the fresh oyster and lime juice.

Keywords: Leucaena leaf; Oyster; Amylase enzyme; Sweet favor