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Microplate Analysis of 31 carbon sources for people effected/uneffected by migraines.

The objective of the study was to observe any micro bacterial differences in the mouth between people who were chronic sufferers of migraines and people who said they did not suffer from migraines. Differences were observed with an Ecolog plate that contained 3 replicates of 31 carbon sources that the bacteria could use to grow. The participants of the study started by filling out a short questionnaire for basic quantitative data. Mouth swabs were then taken of volunteering participants and placed into centrifuge tubes filled with 8 mL of 1% PBS buffer and then vortexed. The sample was emptied into a pipette tray and had 50 microliters pipetted into each of the 96 wells of the Ecolog Plate. The plates were incubated at 37 degrees Celsius for 3 days, and were read at 590 nanometers using a Biotek Microplate Reader.

The analyzed data of the microplates showed that migraine sufferers had higher absorbance values of γ -Hydroxybutyric Acid growing bacteria at 0.189667 ± 0.173711 . Compared to people unaffected by migraines the values were 0.059863 ± 0.07651 . It was also observed that people who suffer from migraines had low absorbance values of D-Galacturonic Acid growing bacteria at 0.003933 ± 0.006643 . This was considered low when compared to the values of 0.056392 ± 0.180113 for the people unaffected by migraines. It was concluded that migraine sufferers have a different mouth micro bacteria make up that makes them more susceptible to migraine headaches.