

## **The study of raw water based on quality parameter using smell-print sensing device**

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### **ABSTRACT**

Water is a renewable natural resource and comprises about 70% of earth whilst the balance is land. Cleanliness and purity of drinking water is important for human health worldwide, thus it is important to know the water body source content so that consumption of it does not give any risk to human body's health. This study focuses on establishing a case library profile and classification of water based on recommended by Ministry of Health (MOH). This study water quality parameters such as iron (Fe) and pH is obtained using Electronic nose (E-nose). E-nose is an instrument that mimics human nose that has the ability to sniff in advance for volatile odor. However, colourless and odourless chemical usually undetectable by normal eyes or noses. Case Based Reasoning (CBR) is used in performing the intelligent classification that involved CBR computation, voting and performance measure. The similarity result shows that the technique accomplished to classify with 97.5% accuracy, 88.0% specificity and 92.2% accuracy.

### **KEYWORDS**

Water quality; E-nose; CBR

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