



Contribution ID: 251 Contribution code: S1 Physics Innovation

Type: Oral Presentation

Experimental Study of Tap Water Activated by Commercial Fruit and Vegetable Purifier

Friday, June 24, 2022 2:15 PM (15 minutes)

Green and clean diets are on focus for consumers with healthy and safety concerns. Good source of safe and clean vegetables and fruits are vital. Vegetables and fruits are often found on market shelves in below standard of good agricultural practices. Pesticides and other chemical residues are found in those fruits and vegetables which may connect to many late complication issues in health. Various methods are utilized as common wisdom to fight the problem. Some methods are more practical and handier. This contribution has studied properties of tap water after activation by a commercial fruit and vegetable purifier. Chlorine, which is present in tap water, is bound with hydroxyl radical from electrohydrolysis by an apparatus to form hypochlorous acid. The activated water is found to peak at 291 nm in its absorbance with a UV-Vis spectrophotometer. Properties of water were studied under various experimental settings such as comparing with activation of de-ionized water, as a function of (i) operating time, (ii) storing time of input tap-water, (iii) storage time of activated water and (iv) water volume. Concentration of hypochlorous acid is calibrated against commercial ready-to-use acid.

Primary authors: Ms SUWANCHATREE, Juthathip (Faculty of Science, Prince of Songkla, Hatyai, Songkla.); Ms MASAE, Shaima (Faculty of Science, Prince of Songkla University); Dr DANGTIP, Somsak (Thailand Institute of Nuclear Technology); Mr SUKSAENGPANOMRUNG, Suebsak (Thailand Institute of Nuclear Technology); Dr NUPANGTHA, Wasin (Thailand Institute of Nuclear Technology)

Presenters: Dr DANGTIP, Somsak (Thailand Institute of Nuclear Technology); Dr NUPANGTHA, Wasin (Thailand Institute of Nuclear Technology)

Session Classification: S1 Physics Innovation

Track Classification: Physics Innovation