

PROTOTYPE OF PORTABLE HYPOCHLOROUS ACID PREPARED FROM PATTANI SALTERN

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Keywords: Sodium chloride salt, Hypochlorous acid, Electrolytic cell, Electrolyzed acid water, COVID-19.

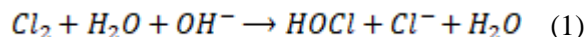
1. Introduction

Hypochlorous acid (HOCl) destroys the COVID-19 virus faster than alcohol in only 10 seconds and it is non-toxic. Hypochlorous acid can be prepared by using an electrochemical reaction to salt. This sweet salt is abundant in Pattani province salt-farms and contains many minerals. This research is to create a portable hypochlorous acid. Therefore, it is designed as a ready-made bottle that can be added salt and prepared in daily life.

2. Methodology

2.1. Equations

Based on the electrolytic cell, Hypochlorous acid can be prepared by using the following equation:



3. Results & Discussion

The concentration of hypochlorous acid was determined by argentometric methods. We found that 1.0 g salt with 1000 mL tap water under the 12 V electricity and 23 A for 10 min produced around 55-277 mg/L of hypochlorous acid concentration.

All elements in Pattani salt-farm were analyzed by XRF and results showed there are 69.88% Cl, 15.55% Na, 9.11% O, 3.73% Mg, 0.59% S, 0.55% K and 0.30% Ca. The sodium sulphate ($\text{Na}_2\text{S}_2\text{O}_3$) compound available in the Pattani salt-farm is as shown in Figure 1.

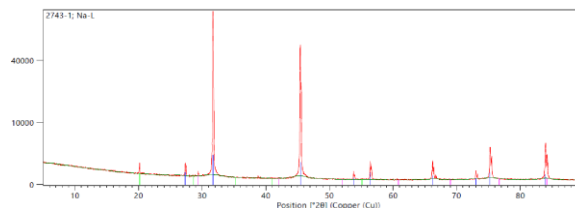


Figure 1. XRD pattern of Pattani salt-farm

4. Conclusion

The variety of ions allowed for a better preparation of hypochlorous acid and this is the reason Pattani salt is usually called sweet salt.

Acknowledgments

This work was supported by Yala Rajabhat University under grant number 016/2021.

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