



Journal of Trace and Microprobe Techniques >

Volume 19, 2001 - [Issue 3](#)

118 | 23
Views | CrossRef citations to date | Altmetric

Original Articles

RED MUD AND WASTE BASE: RAW MATERIALS FOR COAGULANT PRODUCTION

Višnja Orešcanin, Karlo Nad, Vladivoj Valkovic, Nenad Mikulic & Olivio Meštrović

Pages 419-428 | Received 13 Dec 2000, Accepted 06 Feb 2001, Published online: 16 Feb 2007

Cite this article <https://doi.org/10.1081/TMA-100105056>



Full Article

Figures & data

References

Citations

Metrics

Reprints & Permissions

Read this article

Share

Abstract

Proposal for coagulant production using red mud and waste base as raw material, by-products of abandoned alumina factory near Obrovac in Croatia, is described. Basic physico-chemical characteristics of red mud and waste base were also given. Elemental concentrations of red mud, waste base and wastewaters before and after treatment were measured using tube excited EDXRF method. Coagulant production consist of partial dissolution of red mud with diluted sulphuric acid (30% wt), separation of liquid from residual red mud by centrifugation or filtration through the filter press, and neutralisation of acid red mud (pH = 0) with the waste base to pH = 8. This process of red mud neutralisation results in heavy metals removal and also neutralisation of waste base to pH = 8, which could be, after treatment, discharged directly into the environment. Resulting red mud, after neutralisation, is in gel-like state and is suitable

for heavy metals and turbidity removal from industrial wastewaters. As an example, wastewaters from pressure washing of boats coated with antifouling paints were used and promising results were obtained. With one dose of coagulant (activated red mud), five cycles of heavy metals removal could be done.

Keywords:

EDXRF Red mud Waste base Coagulant Antifouling paints Coagulation/flocculation

ACKNOWLEDGEMENT

This work has been supported in part by Zadar county.

Related research

People also read

Recommended articles

Cited by
23

Information for

Authors

R&D professionals

Editors

Librarians

Societies

Opportunities

Reprints and e-prints

Advertising solutions

Accelerated publication

Corporate access solutions

Open access

Overview

Open journals

Open Select

Dove Medical Press

F1000Research

Help and information

Help and contact

Newsroom

All journals

Books

Keep up to date

Register to receive personalised research and resources
by email

 Sign me up

  

  

Copyright © 2026 Informa UK Limited Privacy policy Cookies Terms & conditions

Accessibility



Registered in England & Wales No. 01072954
5 Howick Place | London | SW1P 1WG