Accepted Manuscript

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PII: S1383-5866(16)32005-6

DOI: http://dx.doi.org/10.1016/j.seppur.2017.02.046

Reference: SEPPUR 13578

To appear in: Separation and Purification Technology

Received Date: 10 October 2016 Revised Date: 3 February 2017 Accepted Date: 23 February 2017



Please cite this article as: Y. Li, G. Qu, L. Zhang, T. Wang, Q. Sun, D. Liang, S. Hu, Humic acid removal from micro-polluted source water using gas phase surface discharge plasma at different grounding modes, *Separation and Purification Technology* (2017), doi: http://dx.doi.org/10.1016/j.seppur.2017.02.046

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Humic acid removal from micro-polluted source water using gas phase surface

discharge plasma at different grounding modes

Yujuan Li^{1,2}, Guangzhou Qu^{1,2}, Luyu Zhang^{1,2}, Tiecheng Wang^{1,2,*}, Qiuhong Sun

Dongli Liang^{1,2}, Shibin Hu^{1,2,*}

¹College of Natural Resources and Environment, Northwest A&F University,

Yangling, Shaanxi Province 712100, PR China

²Key Laboratory of Plant Nutrition and the Agri-environment in Northwest China,

Ministry of Agriculture, Yangling, Shaanxi 712100, PR China

³Institute of Soil and Water Conservation, Northwest A&F University, Yangling,

Shaanxi Province 712100, PR China

*Corresponding author: Tiecheng Wang

E-mail: wangtiecheng2008@126.com

Abstract: Humic acid (HA) was a predominant natural organic matter in ground

water and surface waters. The removal of HA from micro-polluted source water using

a gas phase surface discharge plasma at different grounding modes was studied, and

three kinds of grounding modes (iron wire mesh, aluminized paper, and water) were

selected. The experimental results illustrated that approximately 95.3% of HA in

water was removed within 30 min's discharge plasma treatment in the iron wire mesh

electrode system, and it was 89.5% and 84.6% in the aluminized paper electrode

system and water electrode system, respectively; although the strongest streamer

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