

Accepted Manuscript

Title: Method for reducing environmental, health, and safety risks in active pharmaceutical ingredient manufacturing based on multiobjective evaluation

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PII: S0957-5820(16)30204-X
DOI: <http://dx.doi.org/doi:10.1016/j.psep.2016.09.005>
Reference: PSEP 867

To appear in: *Process Safety and Environment Protection*

Received date: 10-5-2016
Revised date: 2-9-2016
Accepted date: 4-9-2016

Please cite this article as: Segawa, A., Yoshikawa, S., Toyama, T., Nakanishi, H., Kikuchi-Uehara, E., Hirao, M., Sugiyama, H., Method for reducing environmental, health, and safety risks in active pharmaceutical ingredient manufacturing based on multiobjective evaluation, *Process Safety and Environment Protection* (2016), <http://dx.doi.org/10.1016/j.psep.2016.09.005>

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1 Manuscript submitted to *Process Safety and Environmental Protection*

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4 Method for reducing environmental, health, and safety risks in active
5 pharmaceutical ingredient manufacturing based on multiobjective
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22 **ABSTRACT**

23 This work presents a method for assessing and retrofitting the manufacturing processes of active
24 pharmaceutical ingredients (API) considering the risks caused by the environment, health, and safety
25 (EHS), as well as economic and technical aspects. This method consists of four steps: (1) process mass
26 analysis, (2) EHS risk evaluation, (3) generation of improvement options, and (4) multiobjective evaluation
27 and interpretation. A new indicator is proposed as a base for risk evaluation, which considers the dynamic

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