

Accepted Manuscript

Evaluation of Cleaner Production Technology Integration for the Chinese Herbal Medicine Industry Using Carbon Flow Analysis

Xiaoyan Meng, Zongguo Wen, Yi Qian, Hongbing Yu



PII: S0959-6526(15)01538-3

DOI: [10.1016/j.jclepro.2015.10.067](https://doi.org/10.1016/j.jclepro.2015.10.067)

Reference: JCLP 6298

To appear in: *Journal of Cleaner Production*

Received Date: 13 February 2015

Revised Date: 22 August 2015

Accepted Date: 17 October 2015

Please cite this article as: Meng X, Wen Z, Qian Y, Yu H, Evaluation of Cleaner Production Technology Integration for the Chinese Herbal Medicine Industry Using Carbon Flow Analysis, *Journal of Cleaner Production* (2015), doi: 10.1016/j.jclepro.2015.10.067.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Evaluation of Cleaner Production Technology Integration for the Chinese Herbal Medicine Industry Using Carbon Flow Analysis

Xiaoyan Meng^a, Zongguo Wen^{a1}, Yi Qian^a, Hongbing Yu^b

^a State Key Joint Laboratory of Environment Simulation and Pollution Control (SKLESPC), College of Environment, Tsinghua University, Beijing 100084, China

^b College of Environmental Science & Engineering, Energy Saving and Cleaner Production Research Center of "985 Project" in Circular Economy, Philosophy and Social Sciences Innovation Base Project, Nankai University, Tianjin 300071, China

Keywords: Low-carbon economy; Bioenergy; Cleaner production; Carbon flow analysis; Technology assessment; Industrial biomass waste

ABSTRACT

The manufacturing sector was an early promoter of CO₂ mitigation and low-carbon development strategies in many countries. The basic unit for these development strategies is enterprises. In order to quantify their performance on resource saving and emission reduction, this study proposed a carbon flow analysis (CFA) approach based on substance flow analysis (SFA). Four special evaluation indicators including the percentage of carbon stored in the product (R_{C-P}), the percentage of carbon as CO₂ (R_{C-CO_2}), the percentage of carbon in solid waste (R_{C-SW}), and the percentage of carbon in COD (R_{C-COD}) were developed. A case study was conducted in an herbal medicine plant, which consumes huge amounts of fossil fuel

¹Corresponding author, E-mail addresses: wenzg@tsinghua.edu.cn (Z. Wen), meng-xy13@mails.tsinghua.edu.cn (X. Meng).

Download English Version:

<https://daneshyari.com/en/article/5479546>

Download Persian Version:

<https://daneshyari.com/article/5479546>

[Daneshyari.com](https://daneshyari.com)