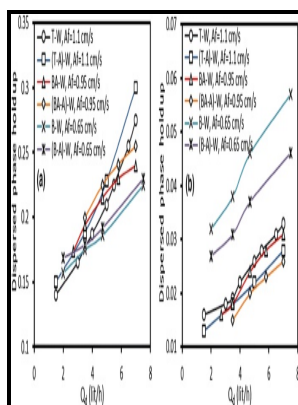


# Theoretical and experimental study of dispersed phase axial mixing in a sieve plate, pulsed solvent extraction column.

- - Mass transfer efficiency of a tall and low plate free area liquid pulsed sieve



Description: -

-theoretical and experimental study of dispersed phase axial mixing in a sieve plate, pulsed solvent extraction column.

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Two

The theoretical models for dispersed phase mass transfer coefficients are listed in. The experimental results for the dispersed phase overall mass transfer coefficient are compared with theoretical models and the models derived for pulsed sieve plate extraction columns.

## Mass transfer studies in a horizontal pulsed sieve

Jahya AB, Pratt HRC, Stevens GW 2005 Comparison of the performance of a pulsed disc and doughnut column with a pulsed sieve plate liquid extraction column.

## CFD and experimental studies of single phase axial dispersion coefficient in pulsed sieve plate column

Khajenoori M, Haghighi-Asl A, Safdari J, Mallah MH 2015 Prediction of drop size distribution in a horizontal pulsed plate extraction column. To observe the axial distribution of acetic acid, aqueous phase samples were taken at three different heights in the column and enough time was given in between any two withdrawals so that each sample was taken at steady state. This paper intends to study the single phase axial dispersion in pulsed sieve plate column using a combination of computational fluid dynamics CFD simulations and experimental measurements.

## EFFECT OF AXIAL MIXING ON MASS TRANSFER IN EXTRACTION COLUMNS

The higher value of the outlet molar concentration without using axial diffusions in the model may be due to the reason that the correlation Eq. Figure shows a typical comparison between an experimental concentration profile and the concentration profiles based on the model results with and without the use of axial diffusivities. The mass transfer performance in a liquid phase pulsed sieve tray column of 50 mm diameter and 4 m height, with 80 trays with a plate free area of 13.

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