Define the conditions of the feeding.

Define: \( P_{op} \), condenser type, \( R_{op} = 1.2 \ R_{min} \)

Fix the separation fractions.

Solve the equivalent configuration model.

Calculate reflux for Petlyuk column.

Configure Petlyuk column.

end

a)

Optimization.

Objective: minimize the total number of stages of the equivalent configuration.

Restrictions of equality:
Compositions of the output flows are similar to those wanted.

Restrictions of inequality:
\[
\begin{align*}
R_{min,i} &> 0 \\
f_{LK,i} &< f_{HK,i} \\
N_{tot} &\geq 3
\end{align*}
\]
for all \( i = 1, 2, 3 \)

Calculate reflux for Petlyuk column.

Configure Petlyuk column.

end

b)