Production of Methyliodide from Hydrogeniodide

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Background:

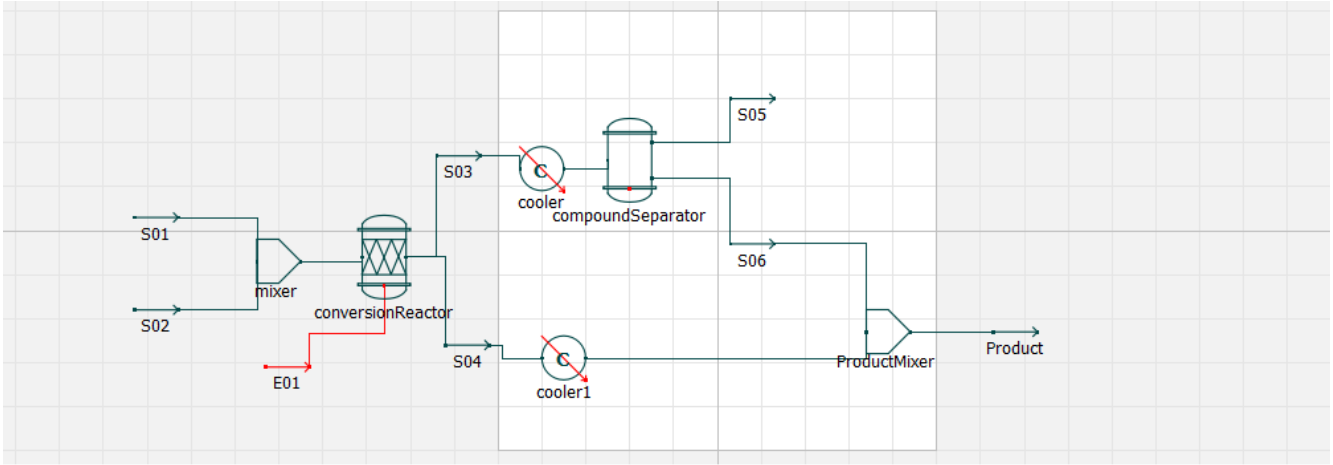
Methyliodide also called as Iodomethane is synthesized from the reaction of Methanol(CH3OH) with Hydrogeniodide (HI). Methyliodide is a clear, **colorless liquid with an acrid odor.** Mostly Methyliodide is used as an intermediate in the manufacture of some pharmaceuticals and pesticides.

Description of the flowsheet:

CH3OH + HI → CH3I + H2O

The major reactants, Methanol and Hydrogeniodide are mixed in a stream mixer and delivered to the conversion reactor, which is an important unit operation in this process. The bottom product primarily contains our product Iodomethane, while the top product primarily contains Water and a small amount of Methyliodide. As an exothermic process, it releases a lot of energy in the form of heat. As a result, coolers are used to lower the temperature of the outputs. The component separator is used to separate the product from the water since it is a simple separation. The extracted product is blended with the bottom product of the Conversion reactor to acquire the full product from the bottom product of the Compound Separator.

Flowsheet:



Conclusion:

Thus, OpenModelica is used for the simulation for the production of Methyliodide from Hydrogeniodide.