

Title (en)

METHOD FOR OBTAINING AROMATIC HYDROCARBONS FROM A HYDROCARBON MIXTURE

Title (de)

VERFAHREN ZUR GEWINNUNG VON AROMATISCHEN KOHLENWASSERSTOFFEN AUS EINEM KOHLENWASSERSTOFFGEMISCH

Title (fr)

PROCÉDÉ DE PRODUCTION D'HYDROCARBURES AROMATIQUES À PARTIR D'UN MÉLANGE D'HYDROCARBURES

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Application

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Abstract (en)

[origin: WO2009043754A1] The invention relates to a method for obtaining aromatic hydrocarbons, selected from benzene, toluol, xylol and ethyl benzene or mixtures thereof, from a mixture of hydrocarbons, which in addition contains non-aromatic hydrocarbons and high-boiling components. The method comprises the steps: (A) preparation of a mixture of hydrocarbons a1 and an extractive solvent using a2 from N-formylmorpholine, (B) extractive distillation of the hydrocarbon mixture a1 using the extractive solvent to obtain a mixture b1 containing extractive solvent and the aromatic hydrocarbons, said mixture containing high-boiling components and a mixture b2 containing non-aromatic hydrocarbons, (C) distillation of the mixture b1 of extractive solvent and the aromatic hydrocarbons obtained in step (B), to obtain one or more fractions c1 of aromatic hydrocarbons and the extractive solvent c2 containing high-boiling components, (D) separation of a partial stream d1 from the extractive solvent c2 and return of the extractive solvent c2 to the extractive distillation (B), (E) extraction of the partial stream d1 of the extractive solvent using water to obtain an aqueous extract phase e1 that is essentially devoid of high-boiling components and an organic phase e2 containing the high-boiling components, (F) distillation of the aqueous extract phase e1 and recovery of the extractive solvent a2 in a purified form and return of the extractive solvent to the extractive distillation (B), a partial stream e2' being separated from the organic phase e2 containing the high-boiling components and being returned to the extraction process in step (E). The circulated quantity of organic phase e2 is measured in such a way that when the partial stream d1 consisting of the extractive solvent containing high-boiling components, water and the circulated stream e2' is dispersed, the aqueous extract phase that is essentially devoid of high-boiling components is formed as a disperse phase and the organic phase consisting of high-boiling components is formed as a continuous phase.

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