

ABSTRACT**Method for producing non-carcinogenic aromatic process oil**

The present invention relates to the chemical or petroleum-processing industry and can be used in the production of petroleum plasticizers for synthetic rubber and tyres. In the method for producing non-carcinogenic aromatic process oil, containing a PCA extract of less than 3.0% according to the IP-346 method, said method comprising purifying the oil fractions of petroleum with selective solvents and separating the extract, additionally processing the extract with a polar solvent and producing a raffinate as the end product, the polar solvent used is a mixture of dimethylsulphoxide and N-methylpyrrolidone, which is used for preliminary processing of the extract, wherein, after the preliminary processing, the mixture of extract and polar solvent is filtered, divided and the light phase is sent to the additional processing of the extract with the polar solvent, and the heavy phase is sent to a polar solvent regeneration stage. The ratio of dimethylsulphoxide to N-methylpyrrolidone in the mixture is within the range of 1:0.1-0.5. The ratio of polar solvent to extract in the additional processing stage is within the range of 1.5-2.5:1. The ratio of polar solvent to extract in the preliminary processing stage is within the range of 0.1-0.3:1. The technical result consists in increasing the efficiency of the process by preventing the formation of an intermediate layer in the extractor column, by reducing the ratio of solvent:extract, and, as a consequence, by increasing the productivity of the plant, simplifying the process of drying the solvent, and eliminating a paraffin-naphthene solvent, which substantially simplifies the regeneration of extractant from the raffinate solution.