

A method for the synthesis of ethyl esters of fatty acids comprises the transesterification of acylglycerols with ethyl alcohol using an alkaline catalyst solution. Tri- and/or di- and/or monoacylglycerols of fatty acids of animal and/or vegetable and/or artificial origin are used as acylglycerols; acylglycerols subjected to transesterification may also contain free fatty acids in an amount equivalent to an acid number of up to 8 mg KOH/g. Potassium ethoxide or potassium ethoxide with an admixture of partially hydrolyzed potassium ethoxide up to 50% of the total content of the alkaline catalyst in the form of an ethanol solution is used as an alkaline catalyst. The transesterification is carried out with a catalyst amount of 0.026-0.074 mol/mol of acyl fatty acid residues in acylglycerols at a ratio of ethyl alcohol with a moisture content of up to 0.5 % by weight and acyl fatty acid residues in acylglycerols of 1.0-2.0 mol/mol and a temperature of 5 to 30 °C and with a transesterification reaction time of 30-120 minutes.