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C07C 49/04 (2006.01)*C07C 29/143* (2006.01)*C07B 35/02* (2006.01)(12) **ABSTRACT OF INVENTION**(21), (22) Application: **2005137833/04, 06.12.2005**(24) Effective date for property rights: **06.12.2005**(45) Date of publication: **20.02.2007 Bull. 5**

Mail address:

**119899, Moskva, Leninskie gory, MGU,
Khimicheskij fakul'tet, komn.215, A.V.Cherpakovu**

(72) Inventor(s):

**Cheprakov Andrej Vladimirovich (RU),
Filatov Mikhail Anatol'evich (RU)**

(73) Proprietor(s):

OOO "EhSTERKEM" (RU)

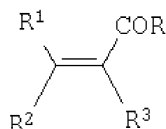
(54) **METHOD FOR REDUCTION OF UNSATURATED KETONES TO SATURATED KETONES**

(57) Abstract:

FIELD: organic chemistry, chemical technology.

SUBSTANCE: invention relates to a method for synthesis of saturated ketones from corresponding unsaturated compounds (enones) using sodium dithionite as a reducing agent in an aqueous-organic medium based on surface-active substances. Method is carried out by reduction of unsaturated ketones of the general formula (I):

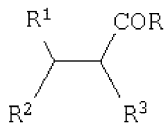
(I) to saturated ketones of the



general formula (II):

(II)

wherein



R means lower alkyl or phenyl; R¹ means hydrogen atom, (C₃-C₆)-alkyl or phenyl; R² means alkyl or

(C₃-C₆)-cycloalkyl, or alkyl substitutes R¹ and R² can form in common 5-6-membered carbocycle; R³ means hydrogen atom. The reduction reaction is carried out with sodium dithionite in an aqueous-organic microemulsion medium containing a surface-active substance as a solubilizing agent, aliphatic alcohols of normal or branched structure with number of carbon atoms from 3 to 5 as a co-solubilizing agent, and water in the mole ratio = 1:(4-6):(200-400), respectively, in the presence of electrolyte. The end substance is isolated by extraction. Method involves using anionic or cationic surface-active substances of the general formula: C_nH_{2n+1}X wherein X means -OSO₃M, -SO₃M, -COOM, -NMe₃Hlg (wherein M means alkaline metal or ammonium; Hlg means halide); n = 11-16. Alkaline metal carbonates or hydrocarbonates are used as an electrolyte. Invention provides using inexpensive available reducing agent, simplifying process, enhancing purity and yield of the end substance.

EFFECT: improved method of synthesis.

3 cl, 9 ex