

Title (en)  
METHOD AND COMPOSITION FOR USING STABILIZED BETA-CAROTENE AS CETANE IMPROVER IN HYDROCARBONACEOUS DIESEL FUELS

Title (de)  
VERFAHREN UND ZUSAMMENSETZUNG ZUR VERWENDUNG VON STABILISIERTEM BETA-CAROTIN ALS CETANVERBESSERER IN KOHLENWASSERSTOFFHALTIGEN DIESELKRAFTSTOFFEN

Title (fr)  
COMPOSITION ET PROCEDE D'UTILISATION DU BETA-CAROTENE STABILISE COMME AMELIORANT DU CETANE DANS DES COMBUSTIBLES DIESEL HYDROCARBONES

Publication  
**EP 1532230 A4 20101117 (EN)**

Application  
**EP 03736989 A 20030610**

Priority  
• US 0318282 W 20030610  
• US 38838502 P 20020611  
• US 40911502 P 20020905

Abstract (en)  
[origin: WO03104360A2] A diesel fuel additive is provided that includes beta-carotene stabilized with 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline. The additive may be added to any liquid hydrocarbon fuel, solid hydrocarbon fuel, or other hydrocarbonaceous combustible fuel to reduce emissions of undesired components during combustion of the fuel, provide improved fuel economy, engine cleanliness, and/or performance. A method for preparing the additive is also provided.

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**C10L 1/14**; **C10L 1/22**

IPC 8 full level  
**C10L 1/08** (2006.01); **C10L 1/14** (2006.01); **C10L 1/232** (2006.01); **C10L 1/16** (2006.01); **C10L 1/18** (2006.01); **C10L 1/22** (2006.01); **C10L 1/30** (2006.01)

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**C10L 1/14** (2013.01); **C10L 1/232** (2013.01); **C10L 10/02** (2013.01); **C10L 10/12** (2013.01); **C10L 1/1608** (2013.01); **C10L 1/1616** (2013.01); **C10L 1/1802** (2013.01); **C10L 1/1824** (2013.01); **C10L 1/1852** (2013.01); **C10L 1/19** (2013.01); **C10L 1/231** (2013.01); **C10L 1/301** (2013.01)

Citation (search report)  
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• [YD] WO 0179398 A1 20011025 - ORYXE ENERGY INT INC [US], et al  
• [X] KASAIKINA, O.T. ET AL.: "Inhibition of the oxidation of beta-carotene by compounds of the series of hydrogenated quinoline", BULLETIN OF THE ACADEMY OF SCIENCES OF THE USSR DIVISION OF CHEMICAL SCIENCE, vol. 24, no. 10, October 1975 (1975-10-01), Moscow, Russian Federation, pages 2131 - 2134, XP002602887, DOI: 10.1007/BF00929738  
• [XY] E. M. BICKHOFF ET AL.: "Alfalfa Carotene, Quinoline Derivatives as Antioxidants for Carotene.", JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol. 2, no. 24, November 1954 (1954-11-01), albany, CA 6, United States, pages 1229 - 1231, XP002602888, DOI: 10.1021/jf60044a005  
• See references of WO 03104360A2

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