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Determination of Components in Rocket Kerosene by GC-MS

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Abstract: Components in rocket kerosene were analyzed by gas chromatography-mass spectrometry. In the condition adopted, 159 peaks were detected in total ion current chromatogram (TIC) of rocket kerosene, 131 peaks among them were identified. The components identified account for 80.37% of total amount of rocket kerosene. It is found in rocket kerosene that, almost half of all components are bicyclo-paraffins, followed by monocyclo-paraffins and iso-alkanes, still by little *n*-alkanes, oxygen-containing compounds, alkenes, tricyclo-paraffins and aromatics. Most bicyclo-paraffins are alkyldecalins, alkylspiro[5.5]undecanes, and naphthenic cyclohexanes, which respectively account for 49.04%, 19.28% and 16.64% of bicyclo-paraffins. Monocyclo-paraffins are mostly alkylcyclohexanes and alkylcyclopentanes, which respectively account for 66.62% and 31.10% of monocyclo-paraffins.

Key words: analytical chemistry; rocket kerosene; component; gas chromatography-mass spectrometry

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中国兵工学会火工烟火专业第十六届学术年会征文通知

为促进我国火工烟火行业的创新发展，中国兵工学会火工烟火专业第十六届学术年会拟于2011年三季度召开。

会议征文内容包括：

1、国内外火工品及相关药剂、烟火剂的基础理论，关键技术；
2、国内外火工品、爆破器材、烟火器材的发展趋势及动态分析；
3、国内外火工品及相关药剂的新工艺、新材料、新方法；
4、火工品及相关药剂、爆破器材、烟火器材安全生产、贮运及销毁新技术；
5、火工品安全性、可靠性评估新方法、新理论；
6、火工品及相关药剂测试分析新技术、新方法及仪器设备；
7、火工品及烟火器材应用研究；
8、十二五火工烟火技术的发展趋势及动态分析。

来稿请写明作者姓名、性别、职称、职务、单位名称、从事研究工作内容、通信地址、邮编、电话、手机、E-mail，以便联系。征文截稿日期为2011年7月10日。

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