MONASH University

PRELIMINARY REPORT

October, 2005

Report on 'Oxyshot' EPR Examination

The standard EPR quartz specimen tube (Wilmad), - 2mm diameter, was used.

A sample of Oxyshot was removed from the supplied bottle, using a pasteurized pipette, and enough transferred to the sample tube to ensure that the EPR cavity active volume (- 0.15 ml) was filled.

The spectrometer was calibrated and checked with our standard Varian 'weak pitch' sample. The chosen temperature for the frozen sample was ~ 130K, obtained by cooled dry nitrogen. Search around g=2 region of thesteady magnetic field (~ 3400 gauss for the ~ 9.4 Ghz microwave frequency, corresponding to a radical spin of 1/2) showed no signal.

This specimen was then placed in a refrigerator where it was frozen, and remained so for 14 days. Subsequently , it was run again under the same conditions, at fields which would reveal radicals with spins 1 or 3/2. No signals were obtained.

On that day, a new sample of Oxyshot was taken from the bottle, and underwent the same procedure and the same tests. No signals were observed.

Conclusions. 1) The lines from any radical species were so broadened by being in the solid state as to be undetectable; TEST: use special solution cell at room temperature for further EPR work. Or 2) The 'compensation' has got rid of the free magnetic moments.

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