



MAURI YEAST AUSTRALIA

Analysis of fermentation aids

(Ref: PCG03F, PCG06Q and PCG10A)

BACKGROUND

Three samples of fermentation aids (in unopened packets) were submitted by Anthony Heinrich of Mauri Yeast Australia. A description of the samples submitted, and the reference code assigned to each sample on receipt at the AWRI, is given below:

Sample description	Institute reference
1 x 10kg box of Mauriferm Fermentation aid "GOLD"	PCG03F
1 x 10kg box of Mauriferm Fermentation aid	PCG06Q
1 x 10kg box of Mauriferm Fermentation aid "Activator"	PCG10A

Mr Heinrich requested that the samples be analysed for 2-chloro-6-methylphenol (commonly known as 6-chloro-*o*-cresol) analysis.

EXPERIMENTAL

All three samples were subjected to the soaking/extraction procedure outlined below before analysis for the concentration of 6CoC.

Fifty millilitres (mL) of redistilled ethanol (98%) was added to five gram (g) of each sample placed in a clean, glass, solvent washed, 100 mL vessel with a ground-glass-joint lid. The sample remained soaking in the redistilled ethanol, with continuous shaking, for three days. After this time, approximately 20 mL of each redistilled ethanol solution was transferred to glass, solvent washed, centrifuge tubes with aluminium lined lids, and centrifuged for approximately five minutes at approximately 3500 rpm. After centrifuging, 10 mL of each supernatant (referred to as the 'sample extract') was accurately transferred to a 100 mL glass, solvent washed, volumetric flask and diluted to 100 mL with *Milli-Q* water, to give a 10% ethanol solution.

Each diluted 'sample extract' was analysed for the concentration of 6CoC by Gas Chromatography – Mass Spectrometry (GC-MS) using a method recently developed at the AWRI.

RESULTS

The results of 6-chloro-*o*-cresol (6CoC) analysis of samples PCF03F, PCG06Q and PCG10A are presented in Table 1 below.

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Table 1. Results of quantification of 6-chloro-*o*-cresol in samples PCG03F, PCG06Q and PCG10A.

Sample	Concentration of 6CoC ¹ (ng/g)
PCG03F	nd ^{2,3}
PCG06Q	nd
PCG10A	nd

Notes:

1. 6CoC = 6-chloro-*o*-cresol
2. 'nd' denotes not detected
3. The detection limit for 6CoC is 0.05 ng/g