

# CALCOAST ANALYTICAL-ITL

Materials Chemistry and Lighting Science

NVLAQ



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Sakura of America  
30780 San Clemente Street  
Hayward, CA 94544-7131

Attn: Mr. C. Vanderwege

Ref: Lab File #0320-4A/D-92

1. **SAMPLE:**

Four (4) Genesis Aquarius dry erase marker

2. **ANALYSIS REQUIRED:**

- A. Headspace Gas Chromatography (GC) - organic volatiles
- B. Karl Fischer (KF) Titration - water content

3. **METHODS OF ANALYSIS:**

A. **Headspace GC**

A composite of the four marker felts were sealed in a borosilicate headspace vial, preheated to 110°C for sixty (60) minutes, and the resulting headspace vapor injected into a gas chromatograph fitted with flame ionization (FID) detection.

B. **KF Water - ASTM D4017**

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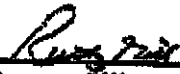
4. RESULTS:

<u>Component</u>	<u>% w/w Felt</u>
$C_5H_{12}$ (aliphatic)	0.30
$C_6H_{14}$ (aliphatic)	0.31
iso - $C_7H_{16}$ (aliphatic)	3.18
$C_7H_8$ (toluene)	0.23
$C_8$ (amine/alcohol)	12.21
Water	<u>83.76</u> 99.99

5. COMMENTS:

The Sakura Aquarius contains a water-based ink system requiring no chronic health hazard warnings as outlined in ASTM D4236 and containing none of the chlorinated solvents associated with solvent-based markers.

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Rusty Gill  
Analytical Chemist

RG:ms

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