

**CERTIFICATE OF ANALYSIS**

**PRODUCT NAME:** Pierce™ Premium-Grade TCEP HCl 1g

**PRODUCT NUMBER:** PG82080

**LOT NUMBER:** ZE385397

**SPECIFICATIONS:**

**MOLECULAR WEIGHT:** 286.65      **Formula:** C<sub>9</sub>H<sub>6</sub>ClO<sub>6</sub>P

**VISUAL:** Snow white crystalline solid, free of foreign material.

**IDENTITY:**

The I.R. scan must show only peaks characteristic for the structure and functional groups of the compound being tested.

The NMR spectrum shows only peaks characteristic for the structure and functional groups of the compound being tested.

**SOLUBILITY:** The solute of a 310 g/L solution prepared in distilled water must remain in solution.

**NMR:** ≥ 95%

**WATER CONTENT:** (Karl Fisher): ≤ 2.0%

**TRACE ANALYSIS:** All metals, including lead, ≤ 50 ppm

**FUNCTIONAL ASSAY:** TCEP HCl reduces ≥ 90% of DNTB to yield TNB.

**RESULTS:**

**MOLECULAR WEIGHT:** 286.65      **Formula:** C<sub>9</sub>H<sub>6</sub>ClO<sub>6</sub>P

**VISUAL:** Snow white crystalline solid, free of foreign material.

**IDENTITY:**

The I.R. scan shows only peaks characteristic for the structure and functional groups of the compound being tested.

The NMR spectrum shows only peaks characteristic for the structure and functional groups of the compound being tested.

**SOLUBILITY:** The solute of a 310 g/L solution prepared in distilled water remains in solution.

**NMR:** 100%

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**CERTIFICATE OF ANALYSIS**

WATER CONTENT: (Karl Fisher): 0.3%

TRACE ANALYSIS: All metals, including lead,  $\leq 50$  ppm

FUNCTIONAL ASSAY: TCEP HCl reduces  $\geq 101\%$  of DNTB to yield TNB.

ADDITIONAL TESTING:  
Melting Point: 179-180 °C

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Timothy Morton, Sr. Quality Chemist



[Rev.001]

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