

# 分析证明书

## 半挥发性有机物 质控样



产品编号: CQC-038  
批号: 211027  
生产日期: 2021-10-27  
分析日期:

保质期: 2024-10-31  
基质/溶剂: 甲醇  
危害: 刺激, 易燃

项目	CAS	纯度	确认值 ug/L	接受区间 ug/L
硝基苯	98-95-3	99.9%	30.0 ± 0.28	24.0 - 36.0
2, 4-二硝基甲苯	121-14-2	99.8%	32.1 ± 0.30	25.7 - 38.5
2, 4, 6-三硝基甲苯	118-96-7	100%	39.9 ± 0.37	31.9 - 47.9
2, 4-二硝基氯苯	97-00-7	99.0%	44.0 ± 0.41	35.2 - 52.8
2, 4-二氯酚	120-83-2	99.8%	49.6 ± 0.46	39.7 - 60
2, 4, 6-三氯酚	88-06-2	99.9%	64 ± 0.60	51.2 - 77
五氯酚	87-86-5	99.8%	64.0 ± 0.60	51.2 - 76.8
邻苯二甲酸二(2-乙基己基)酯	117-81-7	99.9%	80.6 ± 0.75	64.5 - 96.8
邻苯二甲酸二丁脂	84-74-2	99.9%	31.8 ± 0.30	25.4 - 38.2
苯并(a)芘	50-32-8	99.9%	39.9 ± 0.37	31.9 - 47.9
1, 2-二硝基苯	528-29-0	99.9%	80 ± 0.75	64.2 - 96
1, 3-二硝基苯	99-65-0	99.5%	81 ± 0.75	64.4 - 97
1, 4-二硝基苯	100-25-4	99.9%	80 ± 0.75	64.2 - 96
邻硝基氯苯	88-73-3	99.8%	120.2 ± 1.12	96.2 - 144.3
间硝基氯苯	121-73-3	99.5%	120.4 ± 1.12	96.3 - 144.4
对硝基氯苯	100-00-5	99.5%	121.8 ± 1.13	97.4 - 146.1

该质控样品在 配制过程符合 ISO9001, ISO17025及 ISO17034 认证  
接受区间根据当前美国能力验证行业标准设置  
能力验证统计值 为 剔除不合格回报值后的实验室间能力验证结果统计值  
该样品可用于: 方法验证、检测极限研究、能力验证等

### 储存及使用说明

-10 ~ -20℃保存

使用时要回温至室温

上下翻转混匀, 检查是否有沉淀, 如有, 可用超声溶解。按需取适量使用。

- 1, 回温至室温。
- 2, 1000mL Class A 容量瓶中加入900mL试剂水(不含有机物)。
- 3, 打开安瓿瓶, 准确移取1.0mL浓缩液至容量瓶中。
- 4, 定容并混匀。
- 5, 所得即为要分析的样品。

ISO 9001:2015 UL Registered Firm - Certificate # 10002343 QM15



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### 溯源

原料: 分析项目原料选用可用的最高纯度原料用于配制该样品。如有相应的 NIST 标准物质可用, 原料纯度及不确定度会与其对照分析校验

天平: 所有天平按 ISO17025 校准实验室认证要求每季度校准一次, 溯源至 NIST。所有天平每天按照内部标准操作程序查验, 查验所用砝码按 17025 认证要求每年校准一次。

温度计: 所有温度计溯源至 NIST, 每年校准一次

玻璃器皿: 此样品配制过程中涉及的所有玻璃器皿为 A 级。所有玻璃器皿启用前经过内部标准操作程序校验。移液器按 17025 认证要求每月校准一次。

### 均匀性/稳定性/保质期

该标物生产过程中已充分混匀, 批次均匀性按要求随机取样分析建立。该标物稳定性基于短期及长期对确认浓度的监测结果。保质期基于长期监测结果确保保质期内有效

### 不确定度

不确定度为 95% 置信区间扩展系数  $K=2$ 。

ISO 9001:2015 UL Registered Firm – Certificate # 10002343 QM15



ISO 17034:2016 - Certificate AR-1571



ISO/IEC 17043:2010 - Certificate AP-1693



ISO/IEC 17025:2017 - Certificate AT-1690

# Certificate of Analysis

## Semivolatiles QC Std

**Catalog Number:** CQC-038  
**Lot Number:** 211027  
**Manufacture Date:** 10/27/2021

**Expiration:** 10/31/2024  
**Solvent:** Methanol  
**Hazards:** Irritant, Flammable

<u>Analyte</u>	<u>CAS</u>	<u>Analyte Purity</u>	<u>Gravimetric Concentration (ug/L)</u>			<u>Acceptance Limits (ug/L)</u>
Nitrobenzene	98-95-3	99.9%	30.0	±	0.28	24.0 - 36.0
2,4-Dinitrotoluene	121-14-2	99.8%	32.1	±	0.30	25.7 - 38.5
2,4,6-Trinitrotoluene	118-96-7	100%	39.9	±	0.37	31.9 - 47.9
2,4-Dinitrochlorobenzene	97-00-7	99.0%	44.0	±	0.41	35.2 - 52.8
2,4-Dichlorophenol	120-83-2	99.8%	49.6	±	0.46	39.7 - 60
2,4,6-Trichlorophenol	88-06-2	99.9%	64	±	0.60	51.2 - 77
Pentachlorophenol	87-86-5	99.8%	64.0	±	0.60	51.2 - 76.8
bis(2-ethylhexyl)phthalate	117-81-7	99.9%	80.6	±	0.75	64.5 - 96.8
Di-n-butyl phthalate	84-74-2	99.9%	31.8	±	0.30	25.4 - 38.2
Benzo(a)pyrene	50-32-8	99.9%	39.9	±	0.37	31.9 - 47.9
1,2-Dinitrobenzene	528-29-0	99.9%	80	±	0.75	64.2 - 96
1,3-Dinitrobenzene	99-65-0	99.5%	81	±	0.75	64.4 - 97
1,4-Dichlorobenzene	100-25-4	99.9%	80	±	0.75	64.2 - 96
1-Chloro-2-nitrobenzene	88-73-3	99.8%	120.2	±	1.12	96.2 - 144.3
1-Chloro-3-nitrobenzene	121-73-3	99.5%	120.4	±	1.12	96.3 - 144.4
1-Chloro-4-nitrobenzene	100-00-5	99.5%	121.8	±	1.13	97.4 - 146.1

This certified reference material (CRM) was manufactured and certified by NSI Lab Solutions according to quality procedures meeting our accreditation requirements of ISO 17034:2016 and ISO/IEC 17025:2017. Our certificates and scopes of accreditation may be viewed at [www.anab.org](http://www.anab.org).

### Packaging, Storage, Instructions For Use

This CRM is packaged in a flame-sealed ampule and must be stored at -10°C to -20°C. To use this CRM, allow it to reach room temperature. Mix it gently by inversion. Inspect for precipitate. If present, sonicate for a few minutes to redissolve. Open the ampule and withdraw an aliquot appropriate for your application.

Allow the ampule to equilibrate to room temperature. Fill a 1000 mL Class A flask with about 900 mL organic free reagent water. Pipet exactly 1.0 mL of the ampule concentrate into the flask. Bring the flask to volume with reagent water and mix well. This represents the sample for analysis by your normal method. Report in units of ug/L.

**Certified concentration is based upon the gravimetric/volumetric true value when prepared according to instructions.**

**Acceptance limits are based upon USEPA Drinking Water and Non-Potable Water Interlaboratory Studies.**

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### Traceability Information

**Analyte Source Materials:** The highest purity analyte source materials are used in the manufacture of this standard. The actual purity is referenced above.

**Method:** This CRM was verified Volumetrically/Gravimetrically

**Balance:** All analytical balances are calibrated on a semiannual basis by an ISO 17025 accredited calibration laboratory and are traceable to NIST. Traceable Calibration Certificate available upon request.

All balances are checked daily by an in-house standard operating procedure. The weights used for this daily verification are calibrated annually by an ISO 17025 accredited calibration laboratory and are certified traceable to NIST. Certificate of Calibration and Traceability available upon request.

**Thermometer:** All thermometers are NIST traceable through thermometers that are calibrated annually by an ISO 17025 accredited calibration laboratory.

**Glassware:** All glassware used in the manufacture of our standards is Class A. An in-house standard operating procedure is used to verify all glassware prior to it being placed into service. Volumetric pipetors are calibrated every four months by an ISO 17025 accredited calibration laboratory.

### Intended Uses

- Calibration of analytical instruments
- Validation of analytical methods
- Preparation of working level reference materials, i.e. "check standards"
- Detection limit studies

### Homogeneity

This CRM was thoroughly mixed in production and is guaranteed homogenous.

*Ken Grzybowski*

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Ken Grzybowski, Organics Department Manager

*Mark Hammersla*

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Mark Hammersla, President