

安全技术说明书

Safety Data Sheet

第一部分 化学品及企业标识

Section 1 chemical and company identification

1.1 产品名称(中文)：核酸提取试剂 MEG-96C

Product name: NucleicAcidExtractionReagentMEG-96C

1.2 安全技术说明书申请者详情：

SDS Applicant detail:

生产厂商： 亚能生物技术(深圳)有限公司

Manufacturer: YANENG BIOSCIENCE (SHENZHEN) CO., LTD

地址： 深圳市坪山区坑梓街道金辉路 14 号深圳市生物医药创新产业园区 1 号楼 301、302、304、401A1

Address: Room 301, 302, 304, 401A1, Building No.1 Bio-Pharmacy Business Accelerator 14 Jinhui Road, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China

邮编： 518102

Postcode: 518102

电子地址邮件： order@yanengbio.com

E-mail:

传真号码： +86-755-23085300

Fax:

企业应急电话： +86-755-26031053

Emergency Phone:

主要用途： 用于核酸的提取、富集、纯化等步骤

Main purpose: For nucleic acid extraction, enrichment, purification and other steps

第二部分 危险性概述

Section 2 hazards summarizing

2.1 紧急情况概述：液体，可与水混合、高度易燃，可能会生成爆炸性过氧化物。吸入有害，跟皮肤接触有害。吞食后有害。造成严重皮肤灼伤和眼损伤。对水生生物有害并具有长期持续影响。

SUMMARY OF HAZARD IN AN EMERGENCY SITUATION: Liquid. Mix with water. Highly flammable. May form explosive peroxides. Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed. Causes severe skin burns and eye damage. Harmful to aquatic life with long-term adverse effects.

2.2 GHS 分类：

易燃液体类别 2，特异性靶器官毒性一次接触类别 3，急性吸入毒性类别 4，急性经皮肤毒性类别 4，急性经口毒性类别 4，皮肤腐蚀/刺激类别 1，严重眼损伤/眼刺激类别 1，危害水生环境-急性危险类别 3，危害水生环境-长期危险类别 3

Classification of the substance or mixture:

MATERIAL SAFETY DATA SHEET

Version 1.0

Compile Date 18/03/2024

Flammable Liquid Category 2, Specific target organ toxicity-single exposure Category 3(narcotic effects), Acute Toxicity (Inhalation) Category 4, Acute Toxicity (Dermal) Category 4, Acute Toxicity (Oral) Category 4, Skin corrosion/irritation Category 1, Serious eye damage/eye irritation Category 1, Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3

2.3 GHS 标签要素/Label elements:



警示词：危险

Signal word: DANGER

危险性说明/Hazard statement(s) :

H225	高度易燃液体和蒸气	Highly flammable liquid and vapour
H302+H312 +H332	吞咽、皮肤接触或吸入有害	Harmful if swallowed, in contact with skin or if inhaled
H314	造成严重皮肤灼伤和眼损伤	Causes severe skin burns and eye damage
H318	造成严重眼损伤	Causes severe eye damage
H335	可引起呼吸道刺激	May cause respiratory irritation
H402	对水生生物有毒	Toxic to aquatic life
H411	对水生生物有毒并具有长期持续影响	Toxic to aquatic life with long lasting effects

防范说明：预防措施/Precautionary statements) Prevention

P210	远离热源、热表面、火花、明火和其他点火源。禁止吸烟。	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233	保持容器密闭。	Keep container tightly closed.
P235	保持低温。	Keep cool.
P241	使用防爆的[电气/通风/照明/……]设备。	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	使用不产生火花的工具。	Use non-sparking tools.
P243	采取防止静电放电的措施。	Take action to prevent static discharges.
P261	避免吸入粉尘/烟/气体/气雾/蒸气/喷雾。	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	作业后彻底清洗……	Wash...thoroughly after handling.
P270	使用本产品时不要进食、饮水或吸烟。	Do not eat, drink or smoke when using this product.
P271	只能在室外或通风良好之处使用	Use only outdoors or in a well ventilated area.
P273	避免释放到环境中。	Avoid release to the environment
P280	戴防护手套/穿防护服/戴防护眼罩/戴防护面具/戴听力保护装置……	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

防范说明：事故响应/Precautionary statement(s) Response

MATERIAL SAFETY DATA SHEET

Version 1.0

Compile Date 18/03/2024

P370+P378	火灾时：使用化学干粉、二氧化碳、抗醇泡沫灭火器灭火。	In case of fire: Use dry chemical powder, carbon dioxide or alcohol stable foam type extinguishers to extinguish.
P304+P340	如误吸入：将人转移到空气新鲜处，保持呼吸舒适体位。	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301+P330 +P331	如误吞咽：漱口。不得诱导呕吐。	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P312	如感觉不适，呼叫中毒急救中心/医生 /.....	Call a POISON CENTER/doctor/...if you feel unwell.
P303+P361 +P353+P363	如皮肤(或头发)沾染：立即脱掉所有沾染的衣服。用水清洗皮肤[或淋浴]。沾染的衣服清洗后方可重新使用。	IF ON SKIN(or hair) : Takeoff immediately all contaminated clothing. Rinse skin with water [or shower] .Wash contaminated clothing before reuse.
P305+P351 +P338	如进入眼睛：用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出，取出隐形眼镜。继续冲洗。	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

防范说明：安全储存/Precautionary state men(s) Storage

P403+P233	存放于通风良好处。保持容器密闭。	Store in a well-ventilated place. Keep container tightly closed.
P405	存放处须加锁。	Store locked up
P403+P235	存放于通风良好处。保持低温。	Store in a well-ventilated place. Keep cool.

防范说明：废弃处置/Precautionary statement(s) Disposal

P501	处置内装物/容器	Dispose of contents/container to authorized chemical landfill or if organic to high temperature incineration
------	----------	--

2.4 其它危险性质：吸入或食入可能会危害健康。暴露可能会有积累性作用。多次暴露有引起皮肤干燥和破裂的潜在影响。可能会造成呼吸系统和皮肤不适。气体有引起头晕和窒息的潜能。有害：如果被吞食，可能会造成肺部损伤。

Other hazards: Inhalation and/or ingestion may produce health damage. Cumulative effects may result following exposure. Repeated exposure potentially causes skin dryness and cracking. May produced i comfort of the respiratory system and skin. Vapours potentially cause drowsiness and dizziness. HARMFUL: may cause lung damage if swallowed

第三部分成分/组成信息

Section 3 composition/information on ingredients

 纯品

 混合物

 Pure chemical

 Mixture

MATERIAL SAFETY DATA SHEET



Version 1.0

Compile Date 18/03/2024

Product Name	Components	Volume
Nucleic Acid Extraction Reagent MEG-96C 核酸提取试剂 MEG-96C	MEG Lysing Buffer MEG 裂解液	25 ml
	MEG Binding Buffer MEG 结合液	57.6 ml
	MEG Washing Buffer MEG 洗液	67.2 ml
	MEG Magnetic Beads MEG 磁珠	28.8 ml
	MEG Elution Buffer MEG 洗脱液	4.8 ml
	TOTAL	183.4 ml

化学组成:

Chemical ingredients:

组成 component	材料名称 Material Name/molecular formula	含量% Content	CAS No.
MEG 裂解液 MEG Lysing Buffer	Sodium hydroxide /NaOH 氢氧化钠	<5	67-63-0
	Ethylenediaminetetraacetic acid disodium salt C ₁₀ H ₁₆ N ₂ NaO ₈ 乙二胺四乙酸二钠盐	<1	139-33-3
	Water H ₂ O 水	>90	7732-18-5
MEG 结合液 MEG Binding Buffer	Guanidine Thiocyanate CH ₅ N ₃ · HSCN 异硫氰酸胍	<40	593-84-0
	Isopropyl alcohol /C ₃ H ₈ O 异丙醇	<55	67-63-0
	Trometamol C ₄ H ₁₁ NO ₃ 三(羟甲基)氨基甲烷	<2.5	77-86-1
	Water H ₂ O 水	>2.5	7732-18-5
MEG 磁珠 MEG Magnetic Beads	Silicon dioxide SiO ₂ 二氧化硅	<5	14808-60-7
	Iron(II,III) oxide Fe ₃ O ₄	<5	1317-61-9

	四氧化三铁		
	Water H ₂ O 水	>85	7732-18-5
MEG 洗液 MEG Washing Buffer	Ethanol C ₂ H ₆ O 乙醇	<75	64-17-5
	Water H ₂ O 水	>25	7732-18-5
MEG 洗脱液 MEG Elution Buffer	Trometamol C ₄ H ₁₁ NO ₃ 三(羟甲基)氨基甲烷	<2.5	77-86-1
	Water H ₂ O 水	>97.5	7732-18-5

第四部分 急救措施

Section 4 first-aid measures

4.1 急救措施描述

Description of necessary first-aid measures

皮肤接触：接触后立即脱掉所有沾染的衣服，用肥皂和大量清水冲洗皮肤。

After skin contact: In case of contact, take off immediately all contaminated clothing and wash skin with soap and copious amounts of water.

眼睛接触：用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出，取出隐形眼镜。继续冲洗。立即就医。

After eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get prompt medical attention.

吸入：如有吸入，迅速脱离现场至空气新鲜处。如呼吸停止，进行人工呼吸。

After inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration.

食入：如果吞食，禁止催吐。如有食入，用水冲洗口腔。就医。

After ingestion: If swallowed do NOT induce vomiting. If swallowed, wash out mouth with water. Call a physician.

4.2 最重要的急性和延迟症状/效应：无数据资料

Most important symptoms/effects, acute and delayed: no data

4.3 必要时注明立即就医及所需的特殊治疗：无数据资料

Indication of immediate medical attention and special treatment needed, if necessary: No data

第五部分 消防措施

Section 5 fire-fighting measures

5.1 灭火介质

Suitable extinguishing media

灭火方法及灭火剂：用化学干粉、二氧化碳、抗醇泡沫灭火器灭火；

Fire extinguishing method and fire extinguishing agent: Use dry chemical powder, carbon dioxide or alcohol stable foam type extinguishers, spraying extinguishing media to base of flames.

5.2 源于此物质或混合物的特别的危害: 避免被氧化剂, 诸如硝酸盐、氧化性酸、含氯漂白粉、游泳池消毒氯等物质污染, 因为可能引起着火。

Specific hazards arising from the chemical: Avoid contamination with oxidising agents i.e.nitrates, oxidising acids, chlorine bleaches, pool chlorine etc.as ignition may result.

5.3 给消防员的建议: 佩戴防毒面具、自给式呼吸器、穿全身消防服。可能具有激烈或爆炸反应性。考虑疏散人员(或采取现场防护)。再有充足防护的安全距离处灭火。如果可以保证安全, 关掉电器, 直至气体火灾危害被清除。用喷水雾的方法来控制火势, 并冷却邻近区域。避免直接喷水到液池中。不要靠近可能灼热的容器。在有防护的位置喷水冷却暴露于火场中的容器。如果这么做安全的话, 将容器从火场中移走。

Special protective actions for fire-fighters: Put on antigas masks, self-contained breathing apparatus and full fire-fighting suits. Maybe violently or explosively reactive. Consider evacuation(or protect in place) Fight fire from a safe distance, with adequate cover .If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to control the fire and cool adjacent area. Avoid spraying water onto liquid pools. Do not approach containers suspected to be hot Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

第六部分 泄露应急处理 Section 6 accidental release measures

6.1 人身防护、保护设备和应急程序: 使用个人防护设备, 防止吸入蒸汽、气雾或气体。

Personal precautions, protective equipment and emergency procedures: Use proper personal protective equipment, Avoid breathing vapors, mist or gas.

6.2 环境保护措施: 不要让产品进入下水道或水道。

Environmental precautions: Do not let product enter drains or waterways

6.3 防止发生次生灾害的预防措施: 用惰性吸附材料吸收并当作危险废物处理。放入合适的封闭的容器中待处理。

Prevention measures to prevent secondary disasters: Absorption and treatment of hazardous waste with inert absorbent material. Place in proper closed container to be processed.

6.4 参考其他部分: 丢弃处理请参阅第 13 节。

Refer to other parts: Please refer to the thirteenth section for discarding processing.

第七部分 操作处置与储存 Section 7 handling and storage

7.1 安全操作的注意事项: 避免与皮肤和眼睛接触。避免吸入蒸气或雾气。远离火源-禁止吸烟。采取措施防止静电积聚。有关预防措施, 请参阅第 2.2 节。

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition-No smoking. Take measures to prevent the buildup of electrostatic charge. For precautions see section 2.2.

7.2 储存注意事项: 储存在密闭容器中, 阴凉干燥通风处, 远离热源和光源, 远离不相容材料及食品容器的地方。打开的容器必须仔细重新封口并保持竖放位置以防止泄漏。建议储存温度 10-30℃,

Storage considerations: Store in tightly sealed original container, in a cool, dry and ventilated area, far away from heat sources and protected from light, far away incompatible materials and food containers. The open container must be carefully resealed and placed in a vertical position to prevent leakage. Recommended storage

temperature 10-30°C.

第八部分 接触控制/个人防护
Section 8 exposure controls/personal protection

8.1 控制参数

Control parameters

职业接触限值

Components with workplace control parameters

CAS No.	成分 Ingredient	OELs mg/m ³			峰值 Peak	注解 Notes
		MAC	PC-TWA	PC-STEL		
67-63-0	异丙醇 isopropanol	-	350	700	无 none	无 none
1310-73-2	Sodium hydroxide /NaOH 氢氧化钠	2	-	-	无 none	无 none

8.2 适当的工程控制：按照良好的工业卫生和安全规范进行操作。休息前及工作结束时洗手。

Appropriate engineering controls: According to good industrial hygiene and safety standards. You're your hands before and after the rest of the work.

8.3 个人防护措施，如人身保护设(装)备(PPE)：

Individual protection measures, such as personal protective equipment(PPE)：

眼面防护：紧密装配的防护眼镜请使用经官方标准如 NIOSH(美国) 或 EN 166(欧盟) 检测与批准的设备防护眼部。

Eye protection: Close fitting of protective glasses please use the official standards such as NIOSH (USA) or EN166 (EU). Inspection and approval of equipment for eye protection.

皮肤保护：戴手套取。手套使用前必须接受检查是否完好。

Skin sparing: Use gloves. Gloves must be inspected before use.

身体防护：全套防化学试剂工作服，防护设备的类型根据特定工作场所中的危险物的浓度和数量来选择。

Body protection: full set of anti chemical reagent working clothes. Types of protective equipment are selected according to the concentration and quantity of hazardous substances in a particular workplace.

第九部分 理化特性
Section 9 physical and chemical properties

MEG 裂解液/MEG Lysing Buffer

外观与性状：无色透明液体

Appearance: Colorless transparent liquid

闪点(°C)：>80

Flashpoint(°C)：>80

pH 值：不适用

pH: not applicable

沸点(°C)：无

Boiling point(°C)：none

水中溶解度：混溶

Solubility in water: miscible

MEG 结合液/MEG Binding Buffer

MATERIAL SAFETY DATA SHEET

Version 1.0

Compile Date 18/03/2024

外观与性状: 无色透明液体

Appearance: Colorless transparent liquid

闪点(°C): 27

Flashpoint(°C) : 27

pH 值: 6.7-7.5

pH: 6.7-7.5

沸点(°C): 无

Boiling point(°C) : none

水中溶解度: 混溶

Solubility in water: miscible

MEG 磁珠/MEG Magnetic Beads

外观与性状: 棕色悬浊液

Appearance: brown Suspension

闪点(°C): >80

Flashpoint(°C) : > 80

pH 值: 不适用

pH: not applicable

沸点(°C): 无

Boiling point(°C) : none

水中溶解度: 部分混溶

Solubility in water: partly miscible

MEG 洗液/MEG Washing Buffer

外观与性状: 无色透明液体

Appearance: Colorless transparent liquid

闪点(°C): <23

Flashpoint(°C) : < 23

pH 值: 不适用

pH: not applicable

沸点(°C): 无

Boiling point(°C) : none

水中溶解度: 混溶

Solubility in water: miscible

MEG 洗脱液/MEG Elution Buffer

外观与性状: 无色透明液体

Appearance: Colorless transparent liquid

闪点(°C): >80

Flashpoint(°C) : > 80

pH 值: 7.5-8.0

pH: 7.5-8.0

沸点(°C): 无

Boiling point(°C) : none

水中溶解度: 混溶

Solubility in water: miscible

第十部分 稳定性和反应活性

Section 10 stability and reactivity

10.1 反应性: 请参阅第 7 部分

Stability: Please refer to the seventh section.

10.2 化学稳定性: 常温常压下稳定。

Chemical stability: Stable under normal temperatures and pressures

10.3 危险反应: 请参阅第 7 部分

Possibility of hazardous reactions: Please refer to the seventh section.

10.4 应避免的条件: 请参阅第 7 部分

Conditions to avoid: Please refer to the seventh section.

10.5 不相容的物质: 请参阅第 7 部分

Incompatible materials: Please refer to the seventh section.

10.6 危险分解产物: 二氧化碳, 燃烧有机物质的其它热解产物, 氮氧化合物, 硫化物, 氢氰酸, 可能释放有毒烟雾, 可能释放腐蚀性烟雾。

Hazardous decomposition products: carbon dioxide, other pyrolysis products typical of burning organic material, nitrogen oxides sulfur oxides, hydrocyanic acid, may cm it poisonous fumes, may emit corrosive fumes.

第十一部分 毒理学信息

Section 11 toxicological information

11.1 毒理学影响的信息

Information on toxicological effects

急性毒性: 吞咽、皮肤接触或吸入有害

Acute toxicity: Harmful if swallowed, in contact with skin or if inhaled

皮肤刺激或腐蚀: 造成皮肤灼伤。

Skin corrosion/irritation: Causes severe skin burns.

眼睛刺激或腐蚀: 造成眼损伤。

Serious eye damage/eye irritation: Cause eye damage

呼吸道或皮肤过敏: 引起呼吸道刺激。

Respiratory or skin sensitization: May cause respiratory tract irritation.

生殖细胞突变性: 无数据资料

Germ cell mutagenicity: no data

致癌性: 此产品中并没有大于或等于 0.1%含量的组分被 IARC 鉴别为可能的或肯定的人类致癌物。

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC

生殖毒性: 无数据资料

Reproductive toxicity: no data

特定目标器官毒性-----单次接触: 无数据资料

STOT-single exposure: no data

特定目标器官毒性-----重复接触: 无数据资料

STOT-repeated exposure: no data

第十二部分 生态学信息
Section 12 ecological information

12.1 生态毒性:

Ecological toxicity:

成份	CASNo.	终点 ENDPOINT	测试持续时间(小时) TEST DURATION(HR)	种类 SPECIES	价值 VALUE
异硫氰酸胍 guanidine thiocyanate	593-84-0	LC50	96	Fish 鱼	ca.89.1mg/L
		EC50	48	Crustaceans 甲壳纲动物	42.4mg/L
		EC50	72	Algae or other aquatic plants 藻类 或其他水生植物	130mg/L
Isopropyl alcohol /C ₃ H ₈ O 异丙醇	67-63-0	LC50	96	Minnow 鲦鱼	640 mg/L
		EC50	24	water flea 水蚤	5102 mg/L
		EC50	72	Algae 藻类	6851 mg/L

12.2 持久性和降解性: 无数据资料

Biodegradability: no data

12.3 生物积累潜力: 无数据资料

Bioaccumulative potential: no data

12.4 非生物降解性: 无数据资料

Non-biodegradability: no data

12.5 土壤中的迁移性: 无数据资料

Mobility in soil: no data

12.6 其他有害效应: 对水生生物有毒并具有长期持续影响。

Other adverse effects: Toxic to aquatic life with long lasting effects

第十三部分 废弃处置**Section 13 disposal****13.1 废弃处置方法****Disposal methods**

尽可能进行回收, 或咨询制造商有关回收的方法。咨询地方废弃物管理部门有关废弃处置的方法。将残留物掩埋在经批准的填埋场。如有可能, 回收容器, 或在认可的填埋处进行废弃处理。

As far as possible, to recycle, or consult manufacturers about recycling methods. Consult local waste management departments about disposal methods. Bury residues in approved landfill sites. If possible, recycle containers or dispose them in approved landfill sites.

第十四部分 运输信息**Section 14 transport information****14.1 联合国危险货物编号****UN Number**

欧洲陆运危规: UN3316 ADR/RID: UN 3316

国际海运危规: UN3316 IMDG: UN 3316

国际空运危规: UN3316 IATA: UN 3316

14.2 联合国(UN)规定的名称: 化学物品箱**UN proper shipping name: Chemical kit****14.3 运输危险类别****Transport hazard classes**

欧洲陆运危规: 9 ADR/RID: 9

国际海运危规: 9 IMDG: 9

国际空运危规: 9 IATA: 9

14.4 运输包装等级**Packing group**

欧洲陆运危规: I ADR/RID: I

国际海运危规: II IMDG: II

国际空运危规: II IATA: II

14.5 环境危险**Environmental hazards**

欧洲陆运危规：无相关数据	ADR/RID: Not Applicable
国际海运危规：无相关数据	IMDG: Not Applicable
国际空运危规：无相关数据	IATA: Not Applicable

14.6 用户特别注意事项：请参阅第 7 部分

Special precautions for user: Please refer to the seventh section.

第十五部分 法规信息**Section 15 regulatory information**

15.1 法规信息：联合国《关于危险货物运输的建议书规章范本》(20 版)、国际航空运输协会《危险品规则》(61 版)、《国际海运危险货物规则》(IMDG CODE) (39-18 版)、《国际危险货物道路运输欧洲协定》(ADR) (2019 版)、《国际危险货物铁路运输欧洲协定》(RID) (2019 版)

Regulatory information: Recommendations on the transport of dangerous goods-model Regulations 20th, IATA dangerous goods regulations 61st, International Maritime Dangerous Goods Code(39-18), European Agreement concerning the International Carriage of Dangerous Goods by Road(2019), Regulations concerning the International Carriage of Dangerous Goods by Rail(2019)

第十六部分 其他信息**Section 16 other information**

16.1 参考文献：中华人民共和国国家标准(GB/T16483-2008)化学品安全技术说明书内容和项目顺序、中华人民共和国国家标准(GB/T17519-2013)化学品安全技术说明书编写指南

Reference: National standard of People's Republic of China.(GB/T16483-2008)Safety data sheet for chemical products-Content and order of sections, National standard of People's Republic of China.(GB/T17519-2013) Guidance on the compilation of safety datasheet for chemical products

编制日期：2024 年 03 月 18 日第二版

MSDS creation date: 2024/03/18 Version: 1.0

上述信息是根据我们目前的知识状况撰写，我们尽力追求其准确性。然而，针对该信息，我们不作任何适销性的承诺，亦不作其他任何明示的或暗示的承诺。我们对该信息的使用不负任何责任，使用者请根据应用需求，自行判断其可用性。

The information above is believed to be accurate and represents the best information currently available to us.

However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.