1. IDENTIFICATION

(a) Product Identifier: ARK™ Methylphenidate Metabolite Assay
   Product Code: 5042-0004-00

(b) Other means of identification/synonyms

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Internal Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antibody/Substrate Reagent 1</td>
<td>4042-0001-02</td>
</tr>
<tr>
<td>Enzyme Reagent 2</td>
<td>4042-0002-02</td>
</tr>
</tbody>
</table>

Product Type: Liquid

(c) Relevant identified uses of the substance or mixture and uses advised against:
   For Criminal Justice and Forensic Use Only; Not for In Vitro Diagnostic Use

(d) Manufactured/Supplied:
   ARK Diagnostics, Inc.
   48089 Fremont Blvd.
   Fremont, CA 94538 USA
   1-510-270-6270
   Email: customersupport@ark-tdm.com

2. HAZARDS IDENTIFICATION

OSHA/HCS Status:
Regulation (EC) 1272/2008 [GHS] ARK™ Methylphenidate Metabolite Assay
This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture:
ARK™ Methylphenidate Metabolite Assay Not classified.

GHS Label Elements:
Signal word: ARK™ Methylphenidate Metabolite Assay No signal word.
Hazard statements: ARK™ Methylphenidate Metabolite Assay effects or critical hazards.
No known significant effects or critical hazards.

Precautionary statements
Prevention: ARK™ Methylphenidate Metabolite Assay Not applicable.
Response: ARK™ Methylphenidate Metabolite Assay Not applicable.
Storage: ARK™ Methylphenidate Metabolite Assay Not applicable.
Disposal: ARK™ Methylphenidate Metabolite Assay Not applicable.
Supplemental label elements: ARK™ Methylphenidate Metabolite Assay Not applicable.
3. COMPOSITIONS/INFORMATION ON INGREDIENTS

Substance/mixture: ARK™ Methylphenidate Metabolite Assay  
Liquid Mixture  
Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no ingredients which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

Description of necessary first aid measures

Eye contact: If easy to do, remove contact lenses, if worn. Immediately flush eyes with copious amounts of water for at least 15 minutes. If irritation occurs or persists, notify medical personnel and supervisor.

Skin contact: Wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation occurs or persists, notify medical personnel and supervisor.

Inhalation: Immediately move exposed subject to fresh air. If not breathing, give artificial respiration. If breathing is labored, administer oxygen. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Immediately notify medical personnel and supervisor.

Ingestion: If swallowed, call a physician immediately. Do not induce vomiting unless directed by medical personnel. Do not give anything to drink unless directed by medical personnel. Never give anything by mouth to an unconscious person. Notify medical personnel and supervisor.

Protection of first aid responders: See Section 8 for Exposure Controls/Personal Protection Recommendations.

Most important symptoms and effects, both acute and delayed: See Sections 2 and 11.
Indication of immediate medical attention and special treatment needed if necessary: Medical conditions aggravated by exposure: None known or reported. Treat symptomatically and supportively.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- **Eye contact:** No known significant effects or critical hazards.
- **Inhalation:** Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- **Skin contact:** No known significant effects or critical hazards.
- **Ingestion:** No known significant effects or critical hazards.

**Overexposure signs/symptoms**

- **Eye Contact:** No specific data.
- **Inhalation:** No specific data.
- **Skin contact:** No specific data.
- **Ingestion:** No specific data.

**Indication of immediate medical attention and special treatment needed if necessary**

- **Notes to physician:** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested.
- **Specific treatments:** No specific treatment.
- **Protection of first-aiders:** No action shall be taken involving any personal risk or without suitable training.

5. **FIREFIGHTING MEASURES**

**Extinguishing media**

- **Suitable extinguishing media:** In case of fire, use water spray (fog), foam, carbon dioxide or dry chemical as appropriate for surrounding fire and materials.
- **Unsuitable extinguishing media:** None known
- **Hazardous thermal decomposition products:** No specific data.
Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any in Section 8 on suitable and unsuitable materials. See also the information in “For non-emergency personnel”.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleanup

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
7. HANDLING AND STORAGE

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Occupational exposure limits: None

Appropriate engineering controls: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear Liquid
Color: Colorless
Odor: No information identified
Odor threshold: No information identified
pH: 5-8
10. **STABILITY AND REACTIVITY**

Reactivity

No specific test data related to reactivity available for this product or its ingredients.

Chemical Stability

The product is stable when stored as recommended.

Possibility of hazardous reactions

Not expected to occur.

Conditions to avoid

No thermal hazard. Avoid temperatures ≥32°C to preserve biochemical integrity.

Incompatible materials

No information identified.
11. **TOXICOLOGICAL INFORMATION**

Hazardous decomposition products: No information identified.

### Acute Toxicity

Conclusion Summary: Not available

### Irritation/Corrosion

Conclusion Summary: Not available

### Sensitization

Conclusion Summary: Not available

### Mutagenicity

Conclusion Summary: Not available

### Carcinogenicity

Conclusion Summary: Not available

### Reproductive Toxicity

Conclusion Summary: Not available

### Teratogenicity

Conclusion Summary: Not available

### Specific target organ toxicity

- (single exposure) Not available
- (multiple exposure) Not available

### Aspiration hazard

Not available.

**Potential acute health effects:**

- **Eye contact** No known significant effects or critical hazards.
- **Inhalation** No known significant effects or critical hazards.
- **Skin contact** No known significant effects or critical hazards.
- **Ingestion** No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

- **Eye contact** No known significant effects or critical hazards.
- **Inhalation** No known significant effects or critical hazards.
- **Skin contact** No known significant effects or critical hazards.
- **Ingestion** No known significant effects or critical hazards.
Delayed and immediate effects and also chronic effects from short and long term exposure

**Short term exposure**
- Potential immediate effects: Not available
- Potential delayed effects: Not available

**Long term exposure**
- Potential immediate effects: Not available
- Potential delayed effects: Not available
- Potential chronic health effects: Not available

**Conclusion/Summary**
- General: No known significant effects or critical hazards
- Carcinogenicity: No known significant effects or critical hazards
- Mutagenicity: No known significant effects or critical hazards
- Teratogenicity: No known significant effects or critical hazards
- Developmental effects: No known significant effects or critical hazards
- Fertility effects: No known significant effects or critical hazards

**Numerical measures of toxicity**
- Acute toxicity measurement: Not available

12. **ECOLOGICAL INFORMATION**

- Toxicity: Not available
- Conclusion summary:
- Persistence and degradability: Not available
- Conclusion summary:
- Bioaccumulative potential: Not available
- Mobility in soil
- Soil/water partition coefficient ($K_{oc}$)
- Mobility
- Other adverse effects: No known significant effects or critical hazards.
13. DISPOSAL CONSIDERATIONS

Disposal methods Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residue. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Sodium azide may react with lead or copper plumbing to form highly explosive metal azides. Products contain ≤0.09% sodium azide. As a precaution, affected plumbing including instrumentation should be flushed adequately with water to mitigate the potential accumulation of explosive metal azides.

14. TRANSPORT INFORMATION

Transport Based on available data, this product/mixture is not regulated as a hazardous material/dangerous good under EU ADR/RID US DOT, Canada TDG, IATA or IMDG.

UN Number None assigned.
UN Proper Shipping Name None assigned
Transport hazard classes and packaging group None assigned
Special precautions for users Mixture not fully tested – avoid exposure.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code Not applicable

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance and mixture
This SDS complies with the requirements under the US, EU and GHS (EU CLP – Regulation EC No 1272/2008) guidelines. Consult your local or regional authorities for more information.

U.S. Federal regulations TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory TSCA 8(b) Not determined
Clean Air Act Section 112: Not listed
(b) Hazardous Air pollutants (HAPs)
Clean Air Act Section 602 Class I Substances Not listed
Clean Air Act Section 602
Class II Substances: Not listed
DEA List I Chemicals: Not listed
Precursor Chemicals: Not listed
DEA List II Chemicals: Not listed
Essential Chemicals: Not listed

SARA 302/304:

<table>
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<tr>
<th>Name</th>
<th>%</th>
<th>EHS</th>
<th>SARA 302 TPQ (lbs)</th>
<th>SARA 302 TPQ (gallons)</th>
<th>SARA 304 RQ (lbs)</th>
<th>SARA 304 RQ (gallons)</th>
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<tr>
<td>ARK™ Methylphenidate Metabolite Assay, Antibody/Substrate Reagent 1</td>
<td>0.09%</td>
<td>Yes</td>
<td>500</td>
<td>-</td>
<td>1000</td>
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<tr>
<td>sodium azide</td>
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<td>500</td>
<td>-</td>
<td>1000</td>
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</tr>
</tbody>
</table>

SARA 304RQ: 1000000 lbs/454000 kg

SARA 311/312
Classification: Not applicable
Composition/information on ingredients: No products were found.

State regulations
Massachusetts: None of the components are listed.
New York: None of the components are listed.
New Jersey: None of the components are listed.
Pennsylvania: None of the components are listed.
California: None of the components are listed.

Canada inventory:

International regulations
International lists:
- Australia inventory (AICS): Not determined
- China inventory (IECSC): Not determined
- Japan inventory: Not determined
- Korea inventory: Not determined
- Malaysia inventory (EHS Register): Not determined
- New Zealand Inventory of Chemicals (NZIoC): Not determined
- Philippines inventory (PICCS): Not determined
- Taiwan inventory (CSNN): Not determined

Chemical Weapons
Convention List Schedule 1 Chemicals:
Convention List Schedule 2 Chemicals:
Convention List Schedule 3 Chemicals:

16. OTHER INFORMATION

Revision #, Date of Effectivity: See Header of this document

Key to Abbreviations:

ACGIH=American Conference of Governmental Industrial Hygienists
ADR/RID=European Agreement Concerning the International Carriage of Dangerous goods by Road/Rail;
AIHA=American Industrial Hygiene Association
ATE=Acute Toxicity Estimate
BCF=Bioconcentration Factor
CAS=Chemical Abstract Services
CLP=Classification, Labelling and Packaging of Substances and Mixtures
DNEL=Derived No Effect Level
EINECS=European Inventory of New and Existing Chemical Substances
EU=European Union
GHS=Global Harmonized System of Classification and Labelling of Chemicals
IARC=International Agency for Research on Cancer
IATA=International Air Transport Association
IBC=Intermediate Bulk Container
IDLH=Immediately Dangerous to Life or Health
IMDG=International Maritime Dangerous Goods
LOEL=Lowest Observed Effect Level
LOAEL=Lowest Observed Adverse Effect Level
LogPow=logarithm of the octanol/water partition coefficient
MARPOL 73/78=International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978. (Marpol=marine pollution)
NIOSH=National Institute of Occupational Health and Safety
NOEL=No Observed Effect Level
NOAEL=No Observed Adverse Effect Level
NTP=National Toxicology Program
OEL=Occupational Exposure Limit
OSHA=Occupational Safety and Health Administration
PNEC=Predicted No Effect Concentration
SARA=Superfund Amendments and Reauthorization Act
STEL=Short Term Exposure Limit
TDG=Transportation of Dangerous Goods
TSCA=Toxic Substances Control Act
TWA=Time Weighted Average
UN= United Nations
WHMIS=Workplace Hazardous Materials Information System
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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.