

I. Identification

Chemical name and synonyms:	not applicable
Trade name and synonyms:	Multi DNA Extraction kit (Ref: 80-01)
Chemical family:	In Vitro Diagnostic Test Kit (Reagents)
Formula:	not applicable
Proper DOT shipping name:	not applicable
DOT hazard classification:	not applicable
Manufacturer:	Astra Biotech GmbH
Manufacturer's Address:	Rudower Chaussee 29, 12489 Berlin, Germany
Manufacturer's phone/fax:	+49 (0)30 746 96 509/ +49 (0)30 367 405 135

II. Hazards Identification

Chemicals always may cause some special hazards. Therefore they should be handled by trained personnel with the necessary care.

III. Composition, Information on Ingredients

Component	Preservative	Concentration of the hazard substances	Stability at +4 °C
Lysis buffer	none	Guanidine thiocyanate – 4.5 mM,	18 months
DNA-precipitation solution	none	2-Propanol >99.9 %	18 months
Washing solution	none	2-Propanol – 80 %	18 months
Elution buffer	Sodium azide – 0.05 %	-	18 months
Negative control	Sodium azide – 0.05 %	-	18 months

Additional components for pretreatment of dried blood spots:

Component	Preservative	Concentration of the hazard substances	Stability at -18...-30 °C	Stability at +2...+8 °C
Proteinase K, lyo	none	Proteinase K >30 U/mg	36 months	
Dilution buffer	none	-	24 months	
Dried blood spot pretreatment buffer	none	-	24 months	24 months

Information on substances derived from tissues of human origin: absence

IV. First Aid Measures

Symptoms of exposure:

POSSIBLE SENSITISATION BY INHALATION OR SKIN CONTACT: Lysis buffer (Guanidine thiocyanate – 4.5 mM);

POSSIBLE SENSITISATION BY INHALATION: DNA-precipitation solution and Washing solution (2-Propanol >99.9 % and 2-Propanol >80.0 %);

POSSIBLE IRRITANT: DNA-precipitation solution and Washing solution (2-Propanol >99.9 % and 2-Propanol >80.0 %);

FLAMMABLE COMPOUNDS: DNA-precipitation solution and Washing solution (2-Propanol >99.9 % and 2-Propanol >80.0 %).

VERY TOXIC: Elution buffer, Negative control (Sodium azide – 0.05 %)

In case of exposure to reagent solutions, we recommend the following emergency first-aid procedures:

1. Skin or Eye Contact: wash with tap water for at least 15 minutes. Remove any contaminated clothing. Obtain medical attention.
2. Inhalation: remove the affected individual to the fresh air. If breathing is difficult, give oxygen and call a physician.
3. If swallowed: Rinse the mouth with copious amounts of tap water and call a physician.

For Proteinase K:

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.:

Most important symptoms and effects, both acute and delayed

prolonged or repeated exposure can cause: Asthma.

V. Fire-fighting measures

Some kit compounds (DNA-precipitation solution and Washing solution) contain highly flammable liquids. Keep away from heat/sparks/open flames.

Usage of the reagents according to protocol should not incur a fire or explosion hazard. In case of fire, use foam, carbon dioxide or dry chemical, as suitable for surrounding fire and materials.

VI. Accidental Release Measures

Use standard laboratory absorbent materials for cleanup. Clean by enough water.

VII. Handling and storage

Hygienic Practice in Storage: store at temperature +2...+8 °C and dry area away from direct sunlight and incompatible substances.

Storage additional components for pretreatment of dried blood spots:

Proteinase K and Dilution buffer: store at temperature -18...-30 °C and provide appropriate exhaust ventilation at places where dust is formed.

Dried blood spot pretreatment buffer: store at temperature +2...+8 °C and dry area away from direct sunlight and incompatible substances

VIII. Exposure control and personnel protection

Eye Protection: recommended

Skin Protection: recommended

Respiratory Equipment: recommended

Avoid contact with skin, eyes and clothing. Change contaminated clothes. After work wash hands with water and mild soap.

Good laboratory practices should be followed when handling all the reagents.

IX. Stability and reactivity

Lysis solution contains guanidine thiocyanate, which is harmful agent.

DNA-precipitation solution and Washing solution contains 2-Propanol, which is irritant.

Elution buffer and Negative control contain sodium azide which is very toxic agent.

Kit stable under normal conditions.

Additional components for pretreatment of dried blood spots stable under recommended storage conditions.

X. Toxicological information

Guanidine thiocyanate: LD₅₀ (rat) 593 mg/kg body weight

2-Propanol: LD₅₀ (rat) 5.045 mg/kg body weight

LC₅₀ (rat) Inhalation 8h 16000 ppm

Sodium azide: LD₅₀ (rabbit) 10.0 mg/kg body weight

Proteinase K may cause sensitization by inhalation and respiratory irritation.

XI. Ecological information:

Some kit compounds (Lysis buffer) contain agents that is harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment. Avoid release to the environment.

Proteinase K consists of components(s) of unknown hazards to the aquatic environment

XII. Disposal consideration

Dispose in accordance with Local, State and Federal Regulations.

Contaminated Packaging Do not re-use empty containers.









XIII. Transport Information

Kit Multi DNA Extraction and Dried blood spot pretreatment buffer should be transported at room temperature by all means of transport less than 5 days.

Proteinase K transported using refrigerants at 0...-20 °C for 7 days. It can be transported at +18...+25 °C for up to 3 days.

XIV. Regulatory Information

European Labeling according to Regulation (EC) No 1272/2008.

Name	Percent	CAS-No	hazard Symbols	Class	Risk Phrases
Sodium azide	-	26628-22-8	 Warning	H 400 H 410	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
			 Danger	H 300	Fatal if swallowed
2-Propanol	-	71-23-8	 Danger	H 225	Highly flammable liquid and vapour.
			 Warning	H 319	Causes serious eye irritation
			 Warning	H 336	May cause drowsiness or dizziness
Guanidine Thiocyanate	-	593-84-0	 Warning	H 332 H 312 H302 H 412	Harmful if inhaled Harmful in contact with skin Harmful if swallowed. Harmful to aquatic life with long lasting effects
Proteinase K	-	39450-01-6	 Health hazard	H315 H319 H334	Causes skin irritation Causes serious eye irritation May cause allergy or asthma symptoms or breathing difficulties if inhaled.
			 Warning	H335	May cause respiratory irritation.

XV. Other information

This product is designed and evaluated for the professional use by qualified laboratory staff. It has to be used only as *in vitro* diagnostic medical device.

XVI. Disclaimer

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 expressed 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 purpose. In no way shall the company be liable for any claims, losses or damages of any third party or for lost profits of any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.