

For in vitro research use only



ASA Control

for use as quality control in platelet aggregation studies

ASA reagent kit



Verum Diagnostica GmbH
Munich - Germany

Valid for REF MP0170, MP0270, MP0510

V.4.0-US-RUO Revised 2011-11

This box insert is valid for kit formats MP0170, MP0270 and MP0510 of ASA Control.

Intended use

For in vitro research use only. Reagent for use as quality control in platelet aggregation studies on the Multiplate® analyzer^{1,2}. Addition of ASA Control to the blood sample leads to reduced aggregation responses in ASPttest and COLtest.

Principle

ASA Control contains aspirin (30 mg/ml). Upon addition to the blood sample the platelet cyclooxygenase is blocked and therefore cyclooxygenase dependent Multiplate® tests are inhibited, especially ASPttest and COLtest.

This allows the assessment of an abnormal control in these tests.

Reagents

The reagent is provided in three kit formats:

[REF] MP0170 – ASA Control: acetylsalicylic acid; 1 x 1.0 ml, lyophilised (30 mg/ml), with 5 micro test tubes for aliquotation.

[REF] MP0510 – ASA Control: acetylsalicylic acid; 1 x 1.0 ml, lyophilised (30 mg/ml), without micro test tubes for aliquotation.

[REF] MP0270 – ASA Control: acetylsalicylic acid; 3 x 1.0 ml, lyophilised (30 mg/ml), without micro test tubes for aliquotation.

Reagent preparation

Reconstitute with 1.0 ml of high purity (distilled or deionized) water. Allow to stand at room temperature for 10 minutes and swirl gently to mix – do not shake!

Keep all vials tightly closed when not in use. Minimize exposure to light, air and elevated temperatures.

To achieve maximum stability after reconstitution, pipette at least 100 µl aliquots of the reagent into micro test tubes (MP0097) for daily use.

Storage and stability

Unopened vials of ASA Control reagent must be stored at 2-8°C. The reagent is stable until the expiry date printed on the vial label when stored under these conditions. If reconstituted reagent is not aliquoted into micro test tubes, the original vial should be stored in an upright position.

Stable for 7 days after reconstitution when stored at 2-8°C. When stored at < -20°C stable for 4 weeks. Stable for 24 hours at room temperature after one time thawing.

Warnings and precautions

General precautions should be followed when handling specimen and all materials, e.g. wear gloves, minimize exposure of specimen and reagents to the skin. Dispose of all waste materials according to the local regulations.

Sample collection

Blood collection should be performed with caution to avoid prolonged venous stasis and using a large-bore needle during draw. Also avoid foam formation in the blood collection tube. Gently invert the collection tube to ensure complete mixing of the content. Do not freeze or refrigerate samples. Do not preheat the blood before analysis.

The anticoagulant used for blood sample collection significantly affects the results of the test². The use of hirudin as the sample anticoagulant is recommended with a final concentration of 25 µg/ml. Recombinant hirudin is diluted to a concentration of 2.5 mg/ml and applied into the blood collection tube in a ratio of 1:100 (e.g. 30 µl hirudin solution for 3 ml of blood).

Alternatively commercial hirudin tubes (MP0600), standard lithium-heparin tubes or citrated tubes (3.2% citrate) may be used. Always ensure citrate blood collection tubes are filled to the indicated fill volume in order to avoid excessive citrate levels.

The blood collection system must be standardised at each center. It is only possible to compare the results of an individual sample with reference ranges when the same sample anticoagulant (i.e. heparin, citrate or hirudin) is employed.

Performance of the analysis

Samples should be analyzed within the period of 0.5-3 hours after blood collection. Follow the instructions in the Multiplate® user manual and short instructions manual.

COLtest + ASA Control

Test procedure for hirudin or heparin blood:

300 µl saline 0.9%, preheated at 37°C
+ 20 µl ASA Control
+ 300 µl whole blood (room temperature)
→ 3 minutes incubation
+ 20 µl COLtest reagent
→ Start test → 6 minutes measuring time

Test procedure for citrated blood:

300 µl saline-CaCl ₂ (MP0530) preheated at 37°C
+ 20 µl ASA Control
+ 300 µl whole blood (room temperature)
→ 3 minutes incubation
+ 20 µl COLtest reagent
→ Start test → 6 minutes measuring time

ASPttest + ASA Control

Test procedure:

300 µl saline 0.9%, preheated at 37°C
+ 20 µl ASA Control
+ 300 µl whole blood (hirudin blood / heparin blood / citrated blood, room temperature)
→ 3 minutes incubation
+ 20 µl ASPttest reagent
→ Start test → 6 minutes measuring time

During incubation time the cyclooxygenase of the platelets in the sample is inhibited by acetylsalicylic acid.

Final concentration: 1 mg/ml acetylsalicylic acid

It is important to pay close attention to temperatures and incubation times. The use of non-preheated saline or saline-CaCl₂ diluent solution (MP0530) or the introduction of shorter incubation times may skew results.

The saline (NaCl 0.9%) must not contain any additives such as methyl ester.

When using the Multiplate® electronic pipette follow the software instructions displayed by the Multiplate®.

Literature

¹ Jámor C, Weber CF, Gerhardt K, Dietrich W, Spannagl M, Heindl B, Zwissler B. Whole blood multiple electrode aggregometry is a reliable point-of-care test of aspirin-induced platelet dysfunction. *Anesth Analg.* 2009 Jul; 109(1): 25-31.

² Tóth O, Calatzis A, Penz S, Losonczy H, Siess W. Multiple electrode aggregometry: A new device to measure platelet aggregation in whole blood. *Thromb Haemost* 2006; 96(6): 781-8.

Manufacturer

Verum Diagnostica GmbH
Munich - Germany
Phone: +49-89-125556-0
www.multiplate.us
service@verumdiagnostica.com

Distributor

DiaPharma Group, Inc.
8948 Beckett Road, West Chester
OH 45069, USA
Customer Service 800-526-5224
Technical Service 800-447-3846
www.diapharma.com
info@diapharma.com