This package insert follows the Pharmaceuticals, Medical devices and Other Therapeutic Products Act of Japan.

In Vitro Diagnostics
Marketing Approval No. 22200AMX00279000

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This package insert must be read carefully prior to use.

Prothrombin time assay kit
(Classification No.: 30539000)

Coagpia PT-N

General Precautions

1. This product is for in vitro diagnostic use, and must not be used for any other purposes.
2. Clinicians should make a comprehensive clinical decision based on assay results in conjunction with clinical symptoms and other examination results.
3. For the effects of an administered drug on the measured value, carefully read the Precautions for Use in the package insert of the drug, especially the section about the effects on laboratory test results.
4. This product should be used only as directed in this package insert. Reliability of results cannot be guaranteed if there are any deviations from the instructions in this package insert.
5. If the reagent accidentally comes in contact with eyes and/or mouth, rinse immediately with ample water as first aid, and consult the doctor if required.
6. Carefully read the operating instructions for each type of blood coagulation analyzer prior to using this product. Parameters for each type of analyzers are available, and can be requested from SEKISUI MEDICAL CO., LTD. if required.
7. Perform a quality control test prior to assay to ensure accuracy.

Description (Kit Components)

Component	Ingredients
Thromboplastin Reagent:	Thromboplastin (derived from rabbit brain)
	Calcium chloride

Intended Use

Measurement of prothrombin time (PT) using plasma

This product is mainly used for assisting the diagnosis of various diseases due to extrinsic coagulation dysfunction. It is also used for monitoring oral anticoagulant therapy.
The PT test was developed by Quick in 1935 and measures the time required for coagulation. It reflects the activity of coagulation Factor II (prothrombin), Factor V, Factor VII, and Factor X, as well as the level of fibrinogen. Because this test comprehensively assesses the activity of these coagulation factors, it is essential when screening for a bleeding tendency. It is also commonly used for evaluating the effectiveness of treatment with the oral anticoagulant warfarin and adjusting the dosage.[1]

Assay Principle

When thromboplastin and calcium are added to plasma samples, coagulation Factor VII is activated by thromboplastin. Factors X, V, and II are also activated successively, resulting in the production of fibrin. To measure the PT with this product, the time (clotting time) is measured in seconds from addition of tissue thromboplastin and calcium to a plasma sample until fibrin production.

Procedural Precautions **

1. Properties of Samples and Sampling Methods

1) Samples
Plasma (citrated plasma) can be used as the sample. Do not use plasma treated with an anti-coagulant other than sodium citrate.

2) Sampling method
(1) Promptly mix the collected blood with 3.2% sodium citrate at a volume ratio of 9:1, centrifuge the mixture (1500G for at least 15 minutes or 2000G for at least 10 minutes) at 18–25°C within 1 hour, and store the resulting plasma sample.[2]
(2) At the time of blood collection, avoid contamination with tissue fluid and mixing with too much or too little sodium citrate, or accurate results may not be obtained.

3) Storage of samples
Perform the test immediately after separation of plasma. Store the plasma sample at room temperature (18–25°C), and perform the test within 4 hours of separation.

2. Interfering substances

1) Assay results are not affected by free bilirubin (up to 20 mg/dL), conjugated bilirubin (up to 20 mg/dL), hemoglobin (up to 500 mg/dL), or formazin turbidity (up to 3000 FTU).
2) The PT tends to be prolonged when measuring samples from patients on anticoagulant therapy.
3) The PT tends to decrease when plasma samples are contaminated by tissue thromboplastin.

3. Others

Always use Calibrator N for Coagpia for calibration.

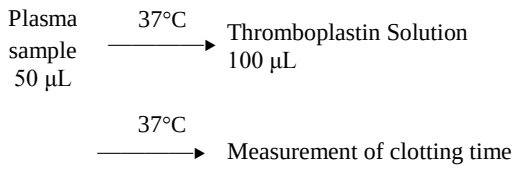
Dosage/Administration (Assay Procedure) **

1. Preparation of reagent

Thromboplastin Solution: Add the specified amount of purified water to 1 vial of the Thromboplastin Reagent, and dissolve it to prepare the Thromboplastin Solution. After dissolution, the Thromboplastin Solution is stable for 8 days at 2–10°C. Stir this product before use (stir with a stirring bar as required when it is attached to the unit).

2. Assay Procedure

This product is compatible with various types of blood coagulation analyzer. An example of the assay procedure is indicated below.



Calibration material: Calibrator N for Coagpia (Manufacture's assigned value)

3. Precautions for testing

1) Before dissolution, warm the Thromboplastin Reagent to room temperature (15–30°C).
2) Add the specified amount of purified water to 1 vial of the Thromboplastin Reagent, fit the inner stopper, mix gently, and let stand for 30 minutes at room temperature (15–30°C). After confirming that the contents of the vial are completely dissolved, gently mix the solution by inversion before use. At this time, avoid vigorous mixing.
3) After completion of measurement, tightly close the container, and store at 2–10°C.

Assessment of Assay Results **

1. Reference standard range[3]

80–120 % (PT activity)

2. Precautions for Assessment

There may be reactions or interfering reactions with non-target substances. If assay results appear to be unreliable, repeat the measurement or try another analytical methods.

Performance **

1. Sensitivity

When the test is performed using normal plasma or 1:4 diluted normal plasma, the PT is ≤ 14 seconds and 25–42 seconds, respectively.

2. Accuracy: 80–120 % of the expected assay value

3. Within-run Reproducibility:

Coefficient of variation ≤ 10 %

(Test methods used for 1.–3. are in-house methods.)

4. Measurement Range[4]: (Coapresta 2000)

5–130 %

5. Correlation[4] (Coapresta 2000)

1) N=138 r=0.994 y=0.96x–1.6
Control method: Approved in vitro diagnostic (clotting time method)
2) N=138 r=0.985 y=1.03x–5.1
Control method: Approved in vitro diagnostic (clotting time method)

6. Standard Material

Pooled plasma obtained from healthy volunteers (in-house reference standard)

Precautions for Use or Handling **

1. Precautions for Handling (to Ensure Safety)

1) All samples used in the test should be handled as a material possibly infected with HIV, HBV, HCV, or other viruses. To prevent infection, use disposable gloves and avoid mouth pipetting during the test.
2) Sodium azide is added as an antiseptic agent in this product. Therefore, if the reagent comes in accidentally contact with eyes, mouth or skin, rinse immediately with ample water as first aid, and consult the doctor if required. Handle the prepared Thromboplastin Solution similarly.

2. Precautions for use

1) This product should be stored as directed. Close the cap of the vial containing the prepared Thromboplastin Solution, and store it at 2–10°C with protection from freezing. Avoid freezing. Do not use this product if it has been frozen because freezing can cause deterioration of the reagents, leading to inaccurate results.
2) Do not use expired reagents. Use of such reagents cannot guarantee the reliability of measurement values.
3) Do not replenish the reagents.
4) Do not mix materials from different kit lot numbers.
5) Do not perform the assay under direct sunlight

3. Precautions for Disposal

1) Before disposal, used samples and their containers must be immersed in sodium hypochlorite solution at a concentration of greater than 0.1% for longer than 1 hour or autoclaved at 121ºC for 20 minutes.
2) To prevent infections from spilled samples or solutions containing samples, wipe the spilled area thoroughly with disinfectants such as sodium hypochlorite solution at a concentration of greater than 0.1%.
3) The reagents and treated samples should be discarded as medical waste or industrial waste according to the waste disposal regulations.
4) The reagents should be disposed of in accordance with the Water Pollution Control act or related regulations.
5) Sodium azide has been added as an antiseptic agent in this product. It can react with lead or copper pipes to produce the highly explosive metal azide. Therefore, the reagent should be flushed with large amounts of water during disposal. Handle the prepared Thromboplastin Solution similarly.

4. Other precautions

Do not use the containers for other purposes.

Storage and Shelf Life **

1. Storage temperature: 2–10°C

2. Shelf life: 2 years from the date of manufacture
(The expiration date is printed on the outer package.)

Packaging

Name		Package
Coagpia PT-N	Thromboplastin Reagent	10×for 4mL

Constituent reagents are available in other configurations. For further details please contact SEKISUI MEDICAL CO., LTD.

References **

1) Kanai M. (supervising editor): Kanai's manual of clinical laboratory medicine. 34th ed. 395, Kanehara Shuppan, 2015.
2) Edited by the Japanese Society for Laboratory

Hematology: J Jpn Soc Lab Hematol, 17(2), 149–157, 2016.
3) Laboratory Test Data Book, Igaku-Shoin, 315, 2001–2002.
4) In house data, SEKISUI MEDICAL CO., LTD.

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Manufacturer * *

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