mdi
Membrane Technologies

PlasmaDrop Kits
for Free Liquid Plasma
(Patent Pending)

Introduction

Many Point of Care (POC) instruments require free plasma for the diagnostic tests to be conducted. This necessitates the removal of red blood cells from whole blood sample. Although centrifugation technique is commonly used, it requires sample to be sent to the lab. Some devices separate RBC from the whole blood but do not provide free plasma as it remains in the separation matrix only.

MDI PlasmaDrop Kit overcomes this problem and makes available a fixed volume plasma from whole blood in a few minutes for Biochemical, Immunological as well as Molecular Biology assays.

The Technology

Whole blood sample is allowed to pass through an RBC retentive medium. Free plasma gets accumulated in a reservoir. By squeezing the device, plasma is driven out and collected in fixed volume dropper. The dropper is then used to deliver the free plasma to a point of care (POC) instrument/ device.

The Kit

The kit consists of a device with RBC retentive medium, a squeeze bulb and a fixed volume dropper for collection and delivery of a fixed volume of free plasma. These are available in different sizes to deliver 2µl and 5µl plasma from finger prick. Larger devices are also available for 10µl and 25µl free plasma.

How it Works

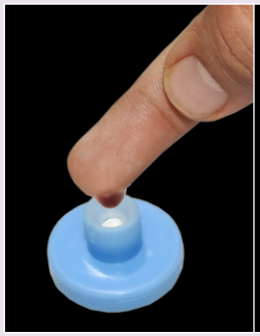
Step 1: Apply 1 drop of finger prick blood in case of 2µl (PD-02) and 2-3 drops for 5µl (PD-05) device.
140-160µl volume of blood for 10µl (PD-10) and 430-470µl for 25µl (PD-25) kit, is pipetted into the device.

Step 2: After ~5 minutes, fit the squeeze bulb on the device without squeezing it.

Step 3: Press the squeeze bulb to apply pressure and get plasma. Collect it in fixed volume dropper.

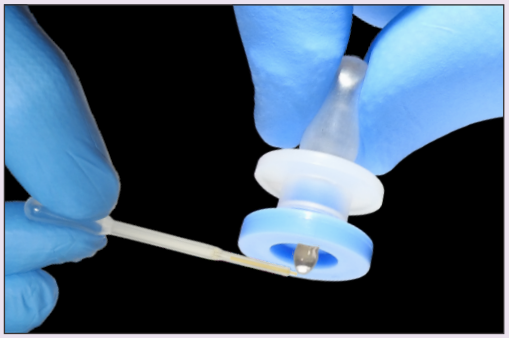
Step 4: Press the dropper to deliver exact quantity of plasma.

Functioning of Plasma Separation Kit

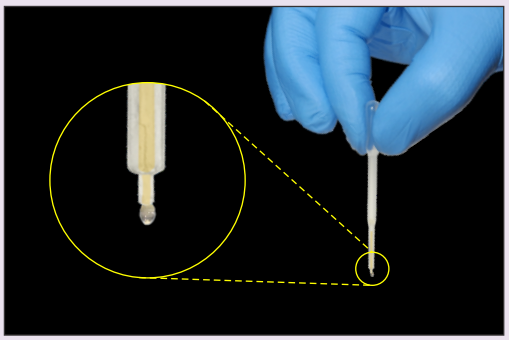


Apply finger prick blood on device

After ~5 minutes, fit the squeeze bulb



Press the squeeze bulb to get the plasma. Collect in fixed volume dropper



Press the dropper to deliver exact quantity of plasma

Data Sheet

Key Features

- Delivers a fixed volume of free plasma from whole blood samples
- Delivers the rated amount of plasma at even 50% hematocrit levels
- Free plasma is recovered in <5 minutes

Applications

The Plasma Separation Kit finds application in:

- Patient bed side testing where liquid plasma is required for qualitative and quantitative assays
- POC instruments and ambulances
- Acute care medical ward testing of patients for admission in ICU and critical care
- Remote areas where lab facilities are not available
- Resource limited settings when centrifuge and electricity are not easily available

Guaranteed Performance even with 50% Hematocrit Level

Type	Blood Applied	Fixed Plasma Collected
PD-02	1 drop (~ 30 µl)	2 µl
PD-05	3 drop (~ 90 µl)	5 µl
PD-10	140-160 µl	10 µl
PD-25	430 - 470 µl	25 µl

Ordering Information

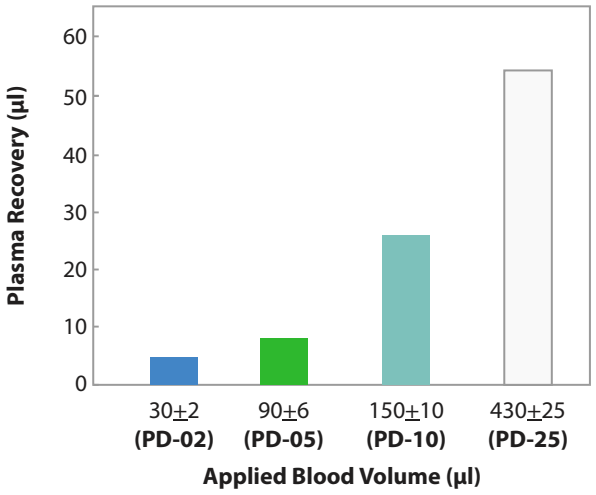
PD-02: PDXK02XXXXXXX02
PD-05: PDXK05XXXXXXX02
PD-10: PDXK10XXXXXXX02
PD-25: PDXK25XXXXXXX02

Please contact for customized kits.

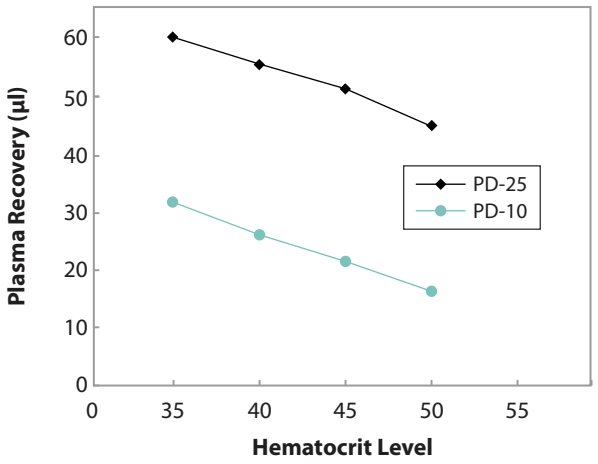
Performance Data

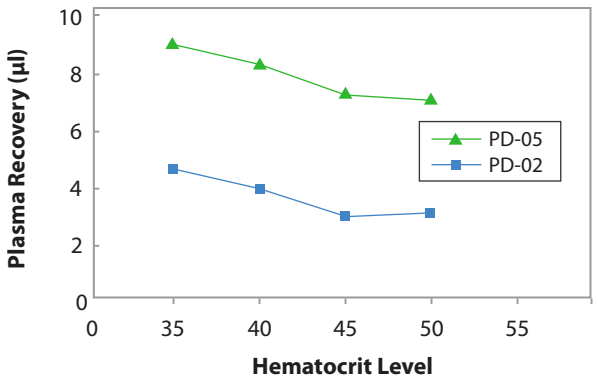
Effect of Blood Volume on liquid plasma recovery

Plasma Recovery using Blood Samples at 40% Hematocrit level



Effect of Hematocrit Level on liquid plasma recovery





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