Sysmex Europe GmbH
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Email: vigilance@sysmex-europe.com

Norderstedt, 28.08.2017/TKR

FIELD SAFETY NOTICE (FSN)

Dear Sysmex customer,

Unfortunately it has come to our attention that Sysmex haematology IVD reagent

Fluorocell PLT

might participate in reporting false low measurement results of the PLT-F channel.

This may lead to wrong diagnostic and patient treatment decisions and serious outcome for patients.
All customers not using this reagent are not affected.

Herewith we request you:

1) Distribute this FSN to the responsible device operators in your organisation
2) Make sure that below described Immediate Action will be applied immediately
3) Please follow your internal SOPs regarding retrospective judgement of affected samples
4) Confirming back to us that you have received this FSN by the Acknowledgement of Receipt (AoR) form attached hereby.

1. Detailed description of the problem

The observations described below are related to certain cartridges of the following lots of Fluorocell PLT (displayed as REF: CD-994-563 on the reagent box), used with XN-Series haematology analysers:

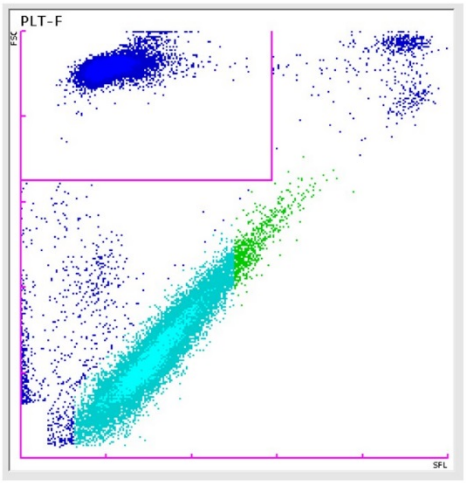
Fluorocell PLT lot	Expiry date
A6056	2017-09-05
A6057	2017-09-08
A6058	2017-09-08
A6062	2017-09-15
A6063	2017-09-22
A6066	2017-09-26
A6067	2017-10-05
A6068	2017-10-05
A6074	2017-10-23
A6075	2017-11-08
A6076	2017-11-08
A6084	2017-11-29
A6085	2017-12-06
A6086	2017-12-06
A6089	2017-12-20

Due to false low PLT-F results caused by certain cartridges of affected Fluorocell PLT lots listed above, Sysmex Europe GmbH has decided to recall the reagents as a preventive measure.

Isolated cartridges of the above mentioned lots show a significant difference between the platelet counts PLT-I and PLT-F. PLT-F results were much lower than PLT-I.
In some cases, the flag 'PLT Abn Scattergram' was triggered. However, in other cases it was not. The false low PLT-F value was associated with a false classification of the PLT population in the PLT-F scattergram.

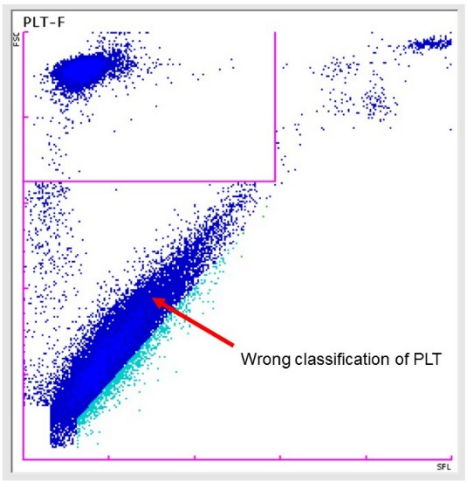
Internal tests with fresh human blood samples showed a decrease of side fluorescence (SFL) for samples measured in PLT-F channel when the affected lots of Fluorocell PLT were used. As a consequence, the PLT-F population was not counted as PLT and thus the PLT-F results became false low. This is recognisable by a dark blue coloured portion of the PLT population (please see Fig. 2). In addition, the diagnostic parameters IPF (IPF %) and IPF# (IPF count) were potentially affected as well.

Examples of human blood measurement:



Item	Data	Unit
WBC	5.44	10^3/uL
PLT-I	243	10^3/uL
PLT-F	242	10^3/uL

Fig. 1: Sample with a correct PLT-F count



Item	Data	Unit
WBC	4.55	10^3/uL
PLT-I	278	10^3/uL
PLT-F	12 *	10^3/uL

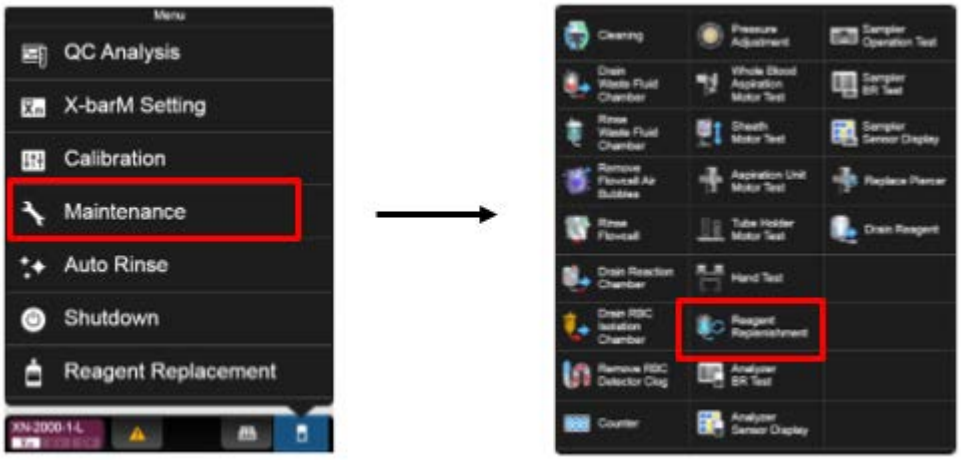
Fig. 2: Sample with a false low PLT-F count

2. Immediate Action to avoid the risk of false measurement results

All Fluorocell PLT lots not listed in the table of chapter 1 can be used as a replacement of the 'affected' lots. They are named 'replacement lots' in this document and will generate correct PLT results.

2.1 If a replacement lot of Fluorocell PLT is available

- Kindly discard the Fluorocell PLT of the affected lots that you might have on stock as per your local guidelines.
- Stop using the affected lots of Fluorocell PLT that you might currently have connected to your XN-Series analyser.
- Upon receipt of replacement lots, **please ensure that the reagent replenishment for Fluorocell PLT is performed twice after executing reagent replacement**. This is to ensure that the reagent in the analysers' tubing and chambers is completely exchanged by the new reagent lot. The 'Reagent Replenishment' option can be found in the analyser maintenance submenu (see image below).



- After reagent replenishment, analyse at least five human blood samples and verify the PLT-F scattergram for abnormalities (review above Fig. 1 and Fig. 2) to ensure the reagent is correctly replenished.

2.2 If a replacement lot of Fluorocell PLT is NOT available

Please understand that SEG cannot deliver replacements for all affected lots immediately. Hence, as the analyser cannot operate without a cartridge installed (if a PLT-F license is installed), some customers may have to continue using the affected lots of Fluorocell PLT.

In such a case, it is **mandatory** to perform the following **'plausibility check' for every** PLT-F result:

1. Check whether the PLT-F value is below the clinical threshold applied in the respective lab, or whether the sample is flagged with 'PLT Abn Scattergram'.

   Samples can be easily filtered in the sample explorer to focus on measurements with PLT-F, and samples with 'affected reagent lots' can be identified by using the 'Reagent' tab (see Fig. 3).

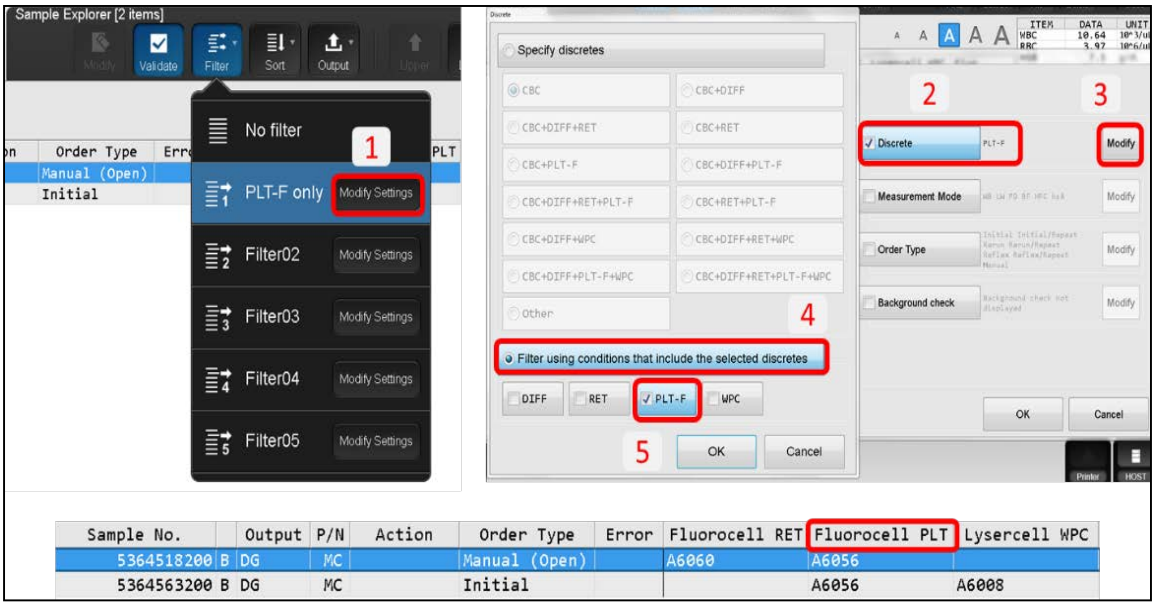


Fig. 3: Filtering of samples with PLT-F measurements. The Fluorocell PLT lot can be seen in the 'Reagent' tab for each measurement

2. Analyse the PLT-F scattergram for abnormalities in the classification of the PLT population, as illustrated in the example above (Fig. 2).

3. Check whether the PLT-F value is significantly lower than the PLT-I value, thereby potentially affecting clinical decisions.

4. If such a significant difference is observed causing a clinical impact, please consider whether the PLT-I value can be used, after verifying the PLT-I histogram. Alternatively, if PLT-O is calibrated, the PLT-O value can be used after verifying PLT-O scattergram (please verify with your local Sysmex representative if PLT-O has been calibrated on your analyser).

5. If during the plausibility check PLT-I, PLT-O and PLT-F values are questionable, perform a smear or measure PLT with the backup system available in your laboratory. For example if PLT-I and/or PLT-F are marked unreliable (*), and the PLT-I histogram and PLT-F scattergram are both abnormal, please verify results with the backup method defined in the laboratory's SOP.

Kindly note, the same 'plausibility check' can be applied to samples that give justified reasons to believe they are affected, and therefore need to be verified retrospectively.

3. Permanent Field Safety Corrective Action (FSCA)

Currently the root cause investigation is ongoing. After the final countermeasure for the product is known, we will inform you about the permanent corrective action.

We very much apologise for any inconvenience this may cause on your side and thank you for your kind understanding and continued support of Sysmex and our products.

Yours sincerely,

Sysmex Europe GmbH

Thomas Kröger

Safety Officer

Customer's
Acknowledgment of Receipt (AoR)

We hereby confirm the receipt of Field Safety Notice (FSN) issued 28th August, 2017 concerning the Field Safety Corrective Action on the IVD medical device

Fluorocell PLT (REF: CD-994-563)
Lots: A6056 to A6089

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A6084	2017-11-29
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A6086	2017-12-06
A6089	2017-12-20

with regard to a **false low PLT-F result in case of a defective reagent lot mentioned above**.

We hereby also confirm that the described Immediate Action will be applied by us.

Please send back this paper to vigilance@sysmex-europe.com until September 8, 2017 at the latest.

Institution .....

Address .....

Responsible & authorised person .....

Position .....

Signature .....

Place / Date .....