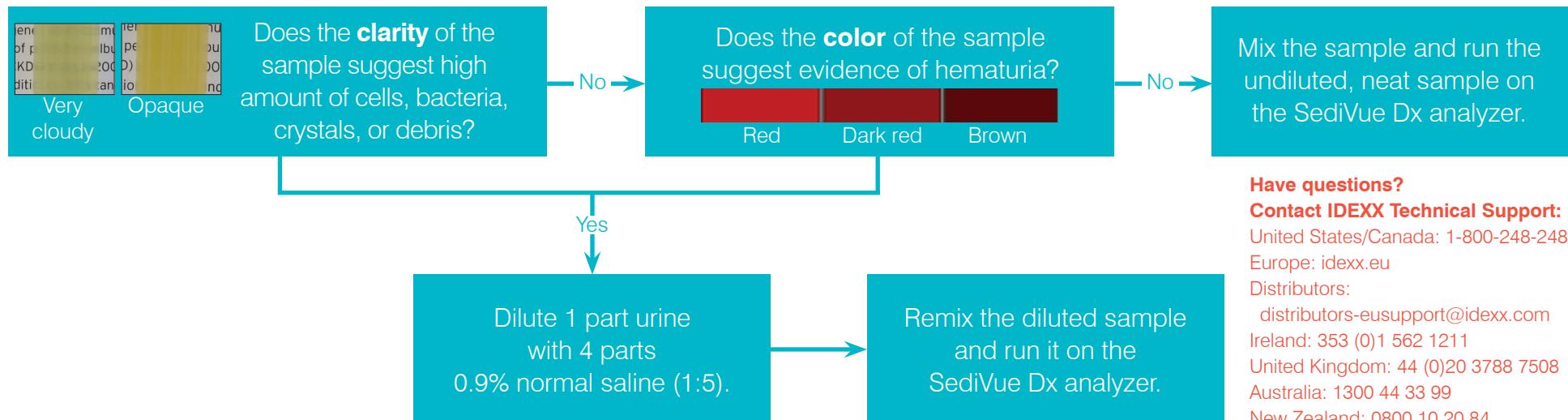


Your key to understanding urinalysis dilutions

When a urine sample is crowded and the edges of the elements overlap, the SediVue Dx convolutional neural network may have difficulty discerning the elements from one another. Diluting the urine sample will help spread the elements apart for easier identification and classification.

This document will help you identify when dilutions may be necessary both preanalysis and postanalysis and provide you with insight to help reduce additional dilution work-flow steps.

Note: Diluting a urine sample may affect the pH and osmolality of the sample and lead to changes in cellular appearance and the presence of crystals.



Postanalysis dilutions guide

When a “crowded” sample is run on the SediVue Dx analyzer, your semiquantitative results may be suppressed and you will be prompted to consider a dilution. When this occurs, an image review is essential to determine the appropriate next steps.

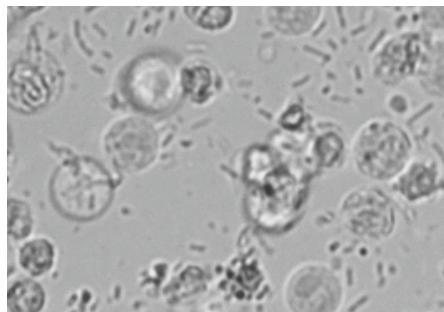
- If the images provide clinical insight, a simple annotation to the patient record may be applied and you may be able to move on without a dilution.¹
- If the images do **not** provide clinical insight, diluting the urine sample will help to spread the elements apart for more accurate analysis. The dilution ratio will vary depending on the severity of the crowding in the sample. Follow the guidelines below to determine if a postanalysis dilution may be helpful.

Do the images provide clinical insight?

If you are prompted to consider a dilution but you can obtain clinical insight from the images, a dilution is unnecessary.²

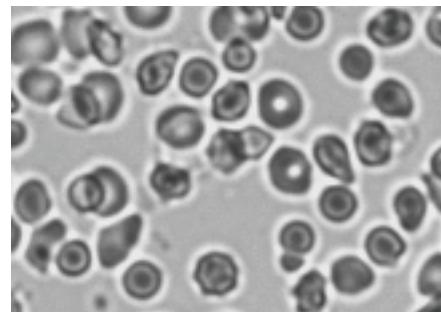
Yes

Image provides clinical insight
(bacteriuria and pyuria evident)



No dilution required

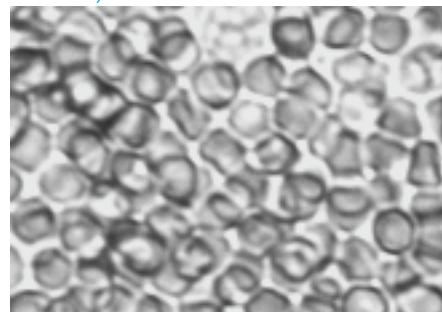
Slightly dense—some background
(obvious hematuria; bacteria may be hidden)



Consider dilution:
1 part urine and 1 part saline³ (1:2)

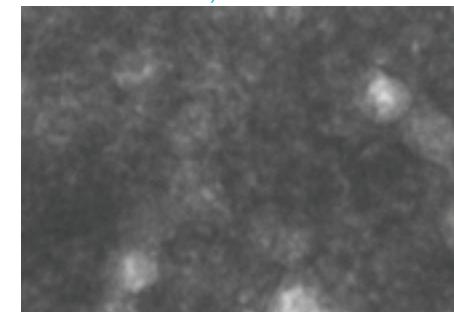
No

Moderately dense—little background (obvious hematuria; other formed elements may be hidden)



Dilute:
1 part urine and 4 parts saline⁴ (1:5)

Extremely dense—no background
(overlapping cells make it impossible to discern elements without dilution)



Dilute:
1 part urine and 9 parts saline⁴ (1:10)

Minimal crowding

Extreme crowding

¹ Dilution flags may also result from excessive bubbles and/or fibers from dirty optics.

² Only the first run for each sample type for the same patient in a 24-hour period will be invoiced. Multiple runs from the same patient that include one or more dilutions and do not provide semiquantitative results will not be invoiced.

³ It may be helpful to confirm bacteria with an air-dried, stained preparation (“dry prep”), rather than a dilution.

⁴ Higher concentrations of diluent will affect the pH and osmolality of the sample and lead to changes in cellular appearance and the presence of crystals.