![CLEMEX]

SAND PARTICLES CHARACTERIZATION
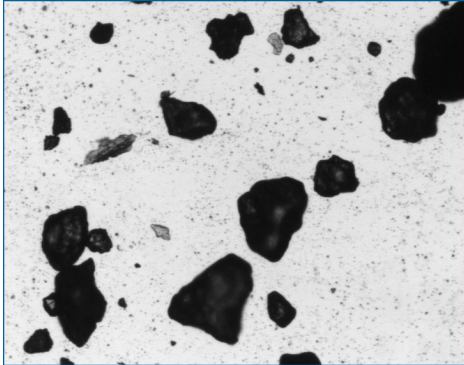

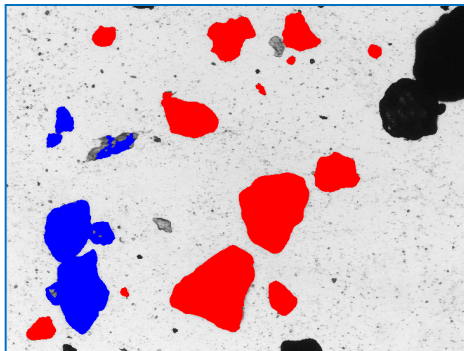*Figure 1: Original image (50X).*

Figure 2: Particles isolated by an Object Transfer on Roughness instruction. Touching particles are left in blue.

Sample Description

One pouch of sand.

Purpose of Analysis

Demonstrate the ability of the Clemex Vision image analysis system to obtain a grain size (length) distribution of sand particles.

Procedure

Sand particles were sprinkled on a glass slide with a drop of liquid to aid dispersion. All particles were binarized in blue using Gray Thresholding. Particles that are elongated and/or smaller than 20 µm and/or sectioned, were removed. Isolated particles were transferred into the red bitplane. These particles were selected by an Object Transfer on Roughness instruction.

Equipment

Image Analysis System:	Clemex Vision PE
Microscope:	Nikon Optiphot-2 with transmitted light
Camera:	Sony XC 77CE 1:1, B/W
Stage:	Motorized marzhauser EK8B-S1 (100X100 mm) with auto focus drive
Magnification:	50X

Results

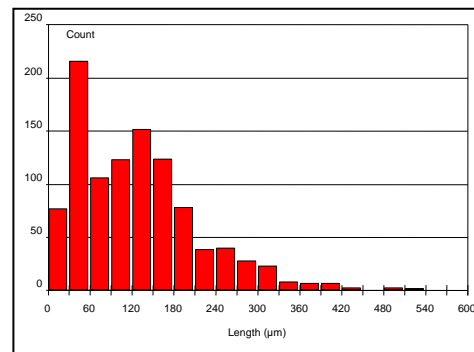|	Length (microns)
Minimum	23.1
Maximum	548.5
Average	128.2
Standard Deviation	85.4

Figure 3: Length measurement distribution of the sand particles.