



Determination of the particle size distribution for procaine

Procaine is a local anaesthetic - an ester type - which is used as a local anaesthetic very seldom today, since much more effective and more deeply penetrating substances like for example lidocaine are available, where allergic reactions are less occurring. However, procaine is still used in the neural therapy, a type of treatment from the areas of alternative or animal medicine.

Relatively new is the discovery that procaine can block the enzyme DNA methylation. This circumstance can be drawn on in order to reverse paragenetic damages of the gen expressions. This is especially interesting with damages of the so called tumour suppressor gene like p53.

The shown particle size distribution was measured with the ANALYSETTE 22 Compact with a small volume dispersion unit.

As a solvent hexane was used since procaine is soluble in water and also in methanol. Prior to the measuring, a suspension of hexane and small amounts of a surfactant were pre-dispersed in an external ultrasonic bath.



analysette22 Compact

Mess Nr. 387 SOP 27
Datum: 11.09.2007 07:49:50

Material Procain

Kommentar

Dispergierung in Hexan + verdünntem Tensid (Tween 80)

30 s Ultraschall vor Messbeginn

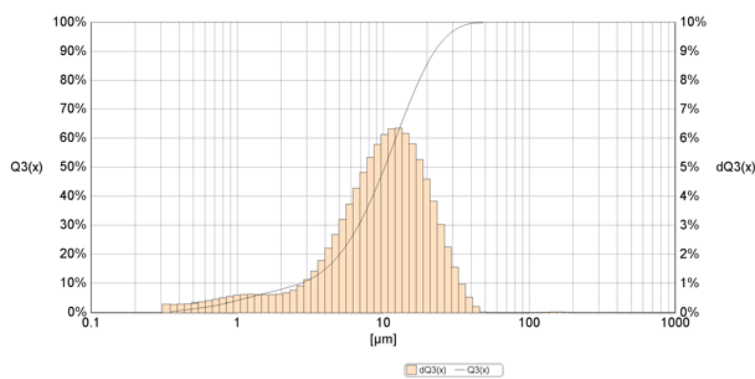
Dispergier-Einheit	SVDU	Meßbereich	0.30 µm - 300.00 µm
Pumpe	100.00 %	Zellpositionen	2
Ultraschall	An	Anzahl der Messkanäle	62
		Anzahl der Scans	4
Strahlabsorption	11.0 %	Berechnung	Model Independent

Prozentwerte

Obere Kornklasse [µm]	Q3(x) [%]
1.178	5.0
2.714	10.0
5.033	20.0
6.784	30.0
8.477	40.0
10.255	50.0
12.228	60.0
14.603	70.0
17.725	80.0
22.628	90.0
27.114	95.0
36.062	99.0

Korngrößen

Obere Kornklasse [µm]	Q3(x) [%]
0.300	0.3
0.500	1.3
1.000	4.1
3.000	10.9
5.000	19.8
10.000	48.6
15.000	71.6
20.000	85.4
30.000	96.9
40.000	99.6
50.000	99.9
60.000	99.9



Geometrischer Mittelwert	8.68 µm	Modalwert	12.20 µm
Arithmetischer Mittelwert	11.72 µm	Median	10.23 µm
Quadratischer Mittelwert	14.14 µm		

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