



INSITU PAT SENSOR TECHNOLOGY



in situ

In situ

PAT



*Распределение частиц  
по размерам*

*Мониторинг частиц*

*Количество частиц*

*Анализ частиц*

[www.sequip.de](http://www.sequip.de)

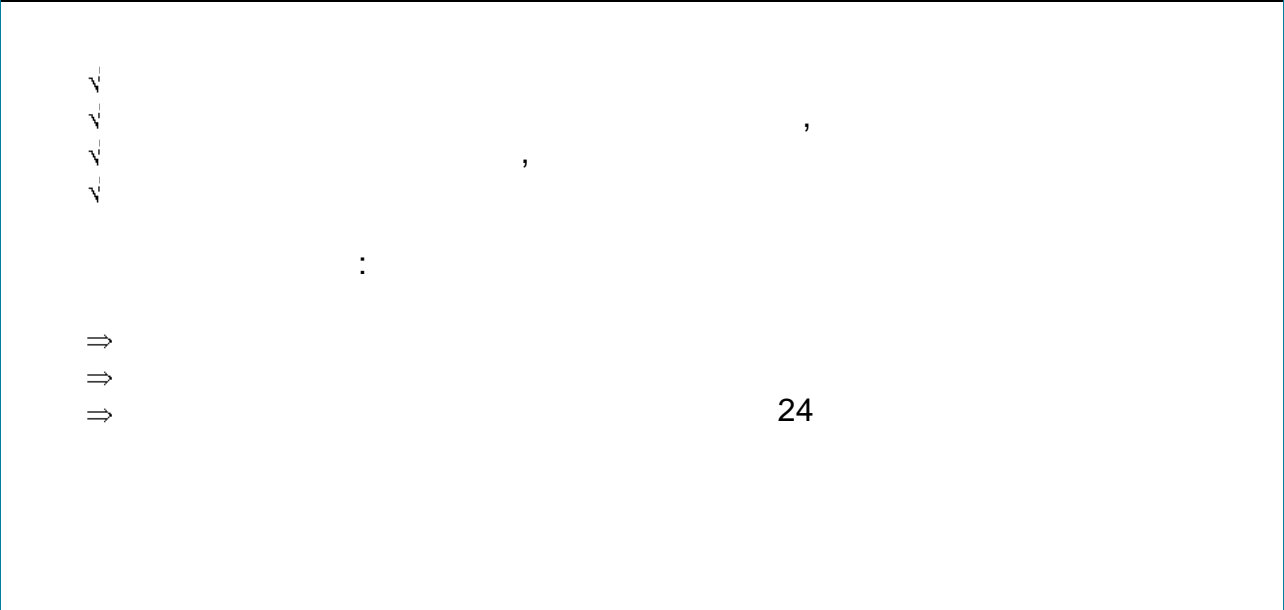
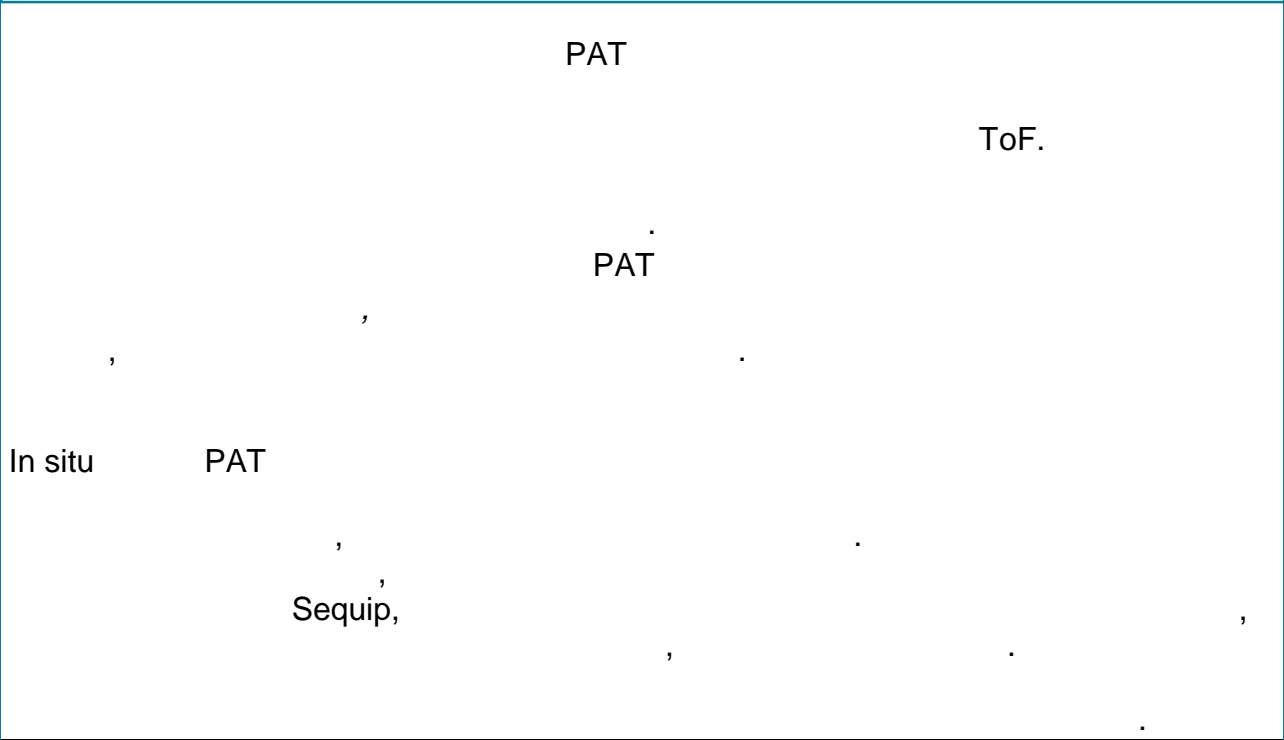


In situ	PAT		3
			4
			6
LSRA —			8
PMS —			10
ECA —			11
LPS —			12
IPAS —		in situ	13
IMAS —		in situ	13
APAS —			14
			15
			17
			18
			19
			20



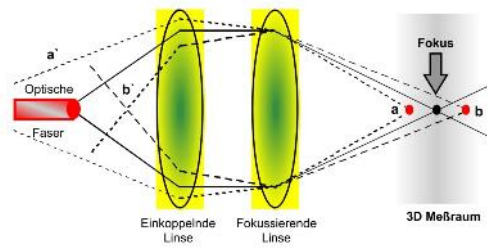
# In situ

# PAT





: **ORM**  
ORM ( )



1D ->  
2D ->  
3D ->

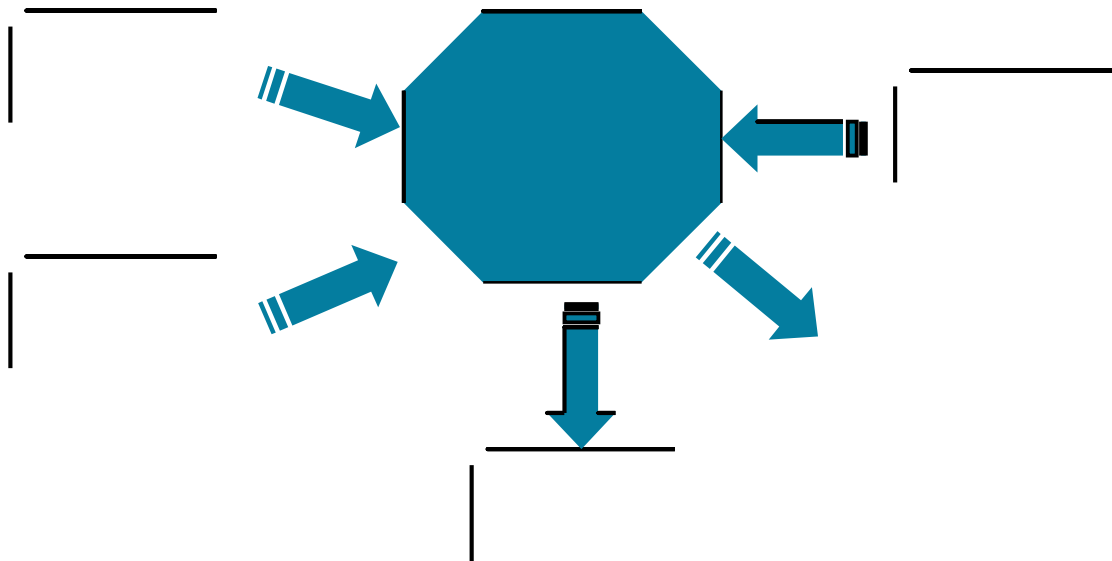
LSRA ( . . 8).



3D ORM,                      Sequip  
(EPSA),  
(MCSSTA™).

in situ), **IMAS** (

**IPAS** (                      Sequip.  
in situ) **APAS**





**PAT**  
 in situ  
 2-2000  
 : 2004

: 3D ORM

**ECA —**  
 :  
 , 0.5 – 125  
 : 2002

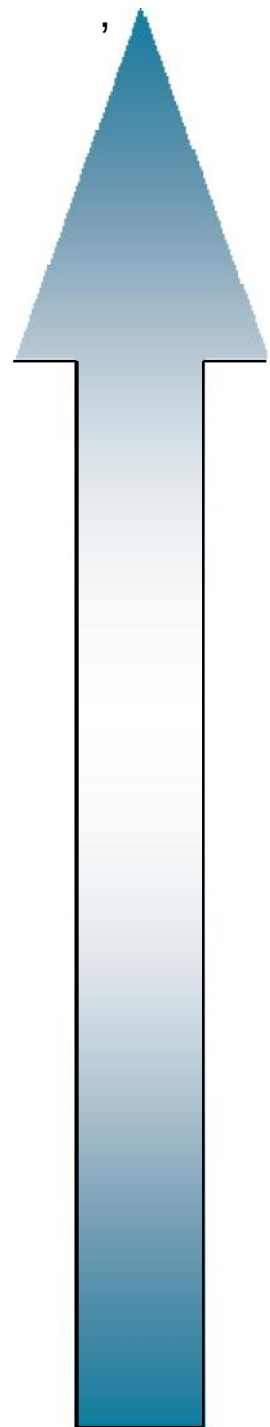
: 3D ORM

**PMS —**  
 :  
 10-<300 , 30-<600  
 : 2000

: 1D ORM

**LSRA —**  
 :  
 : 1999

:



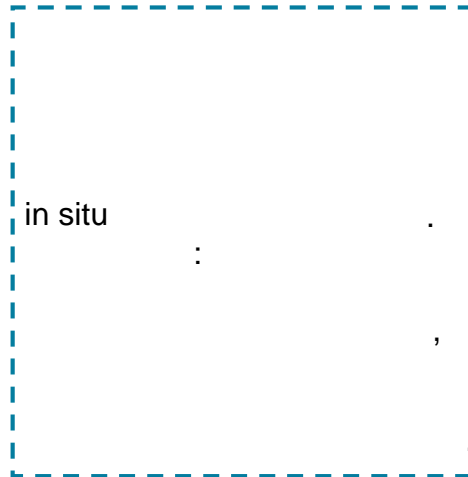


**APAS —**

: in situ

0,5 — 4000

: 2011

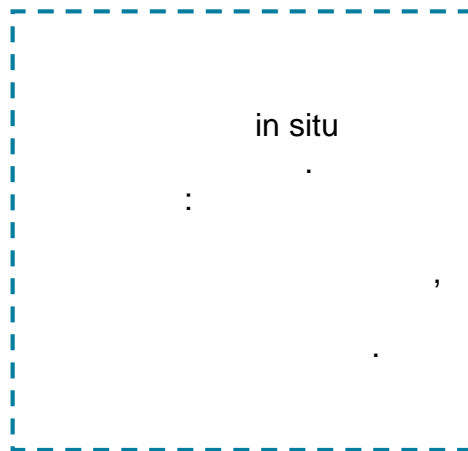


**IMAS— In situ**

: in situ

0.5-2000

: 2010

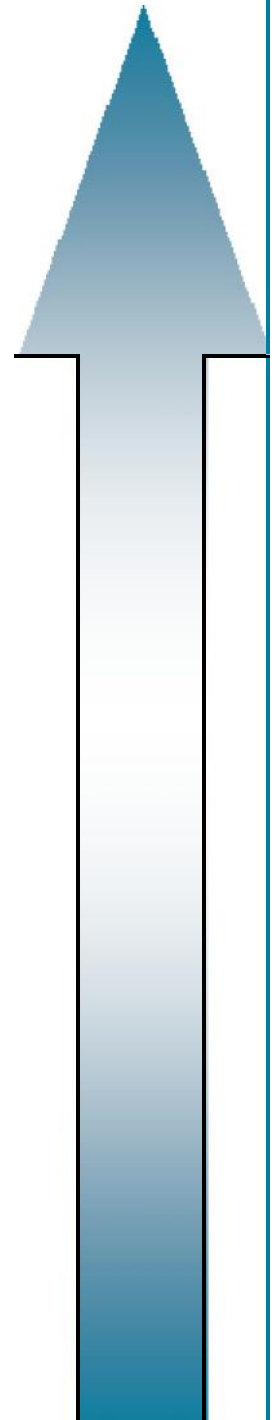
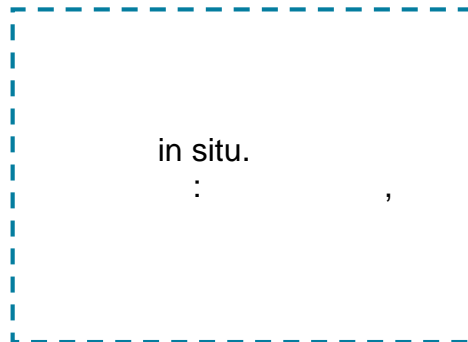


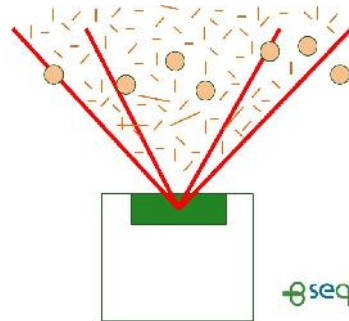
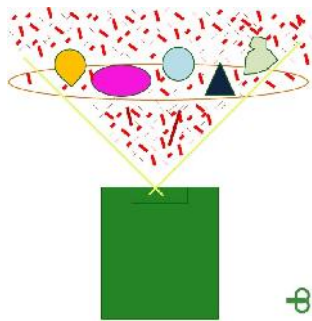
**IPAS — In situ**

:

0.5-2000

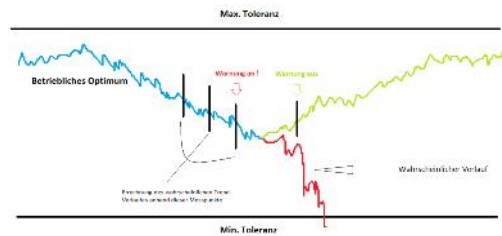
: 2006





Эффекты многократного рассеяния  
для 2D ORM и зонда FBRM™

« »











# ECA

ECA

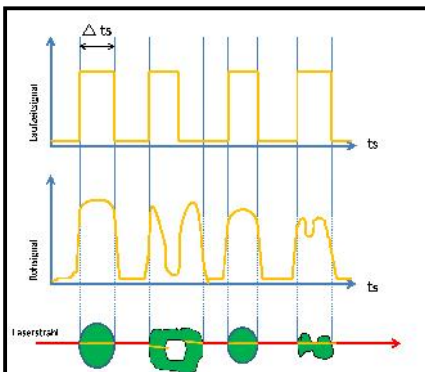
(ToF)  
10

ECA

(ORM).

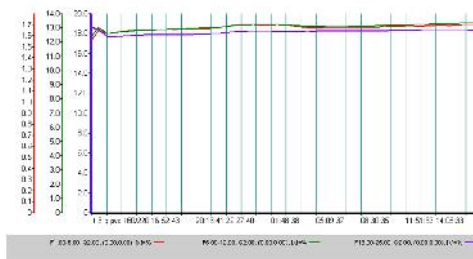
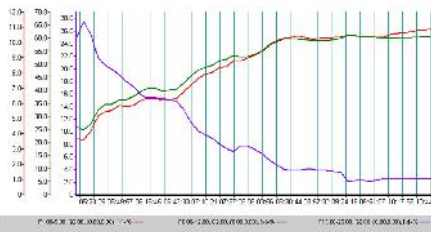
ECA

1 (2 )



- : 0,5 – <60
- : < 2 – <125
- : < 70 % ( / )
- : 5° - 85 °C
- : 6
- : 18

## WIN ORM

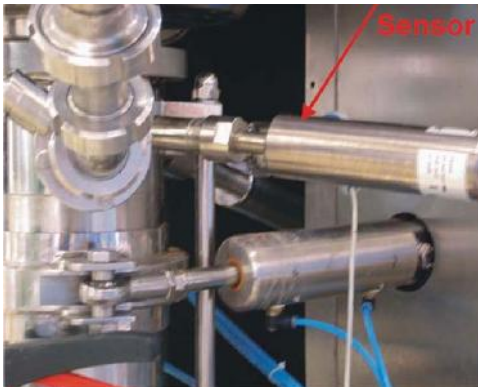




# ECA

ECA:

,



:

24 / 365



# In situ Labor Particle Sizer

in situ

In situ 3D

3D ORM

3D ORM

:	0,5 – 125
:	1 – 500
:	< 40 %
:	5° 165 °C
:	6
:	18 , 25



- In situ
- 
- 
- 
- 
- 
- 
-



# PAT

## *in situ* — IPAS

ToF ( . . . 12).

<0.5 2000 .

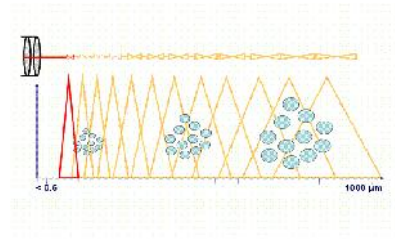
0,5 – 2000

< 40%

-90° 220 °C

16; 32; 64 300

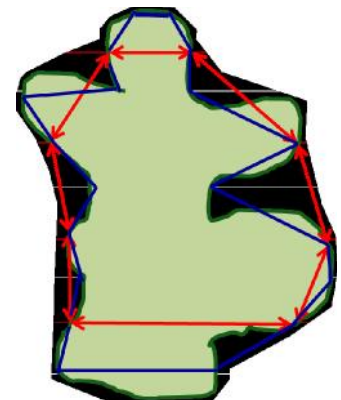
: 10 ; 14 ; 18 ; 25 ;  
30 ; 45



## *in situ* — IMAS

IPAS

Multi



Capture Signal Analysis.

1 .



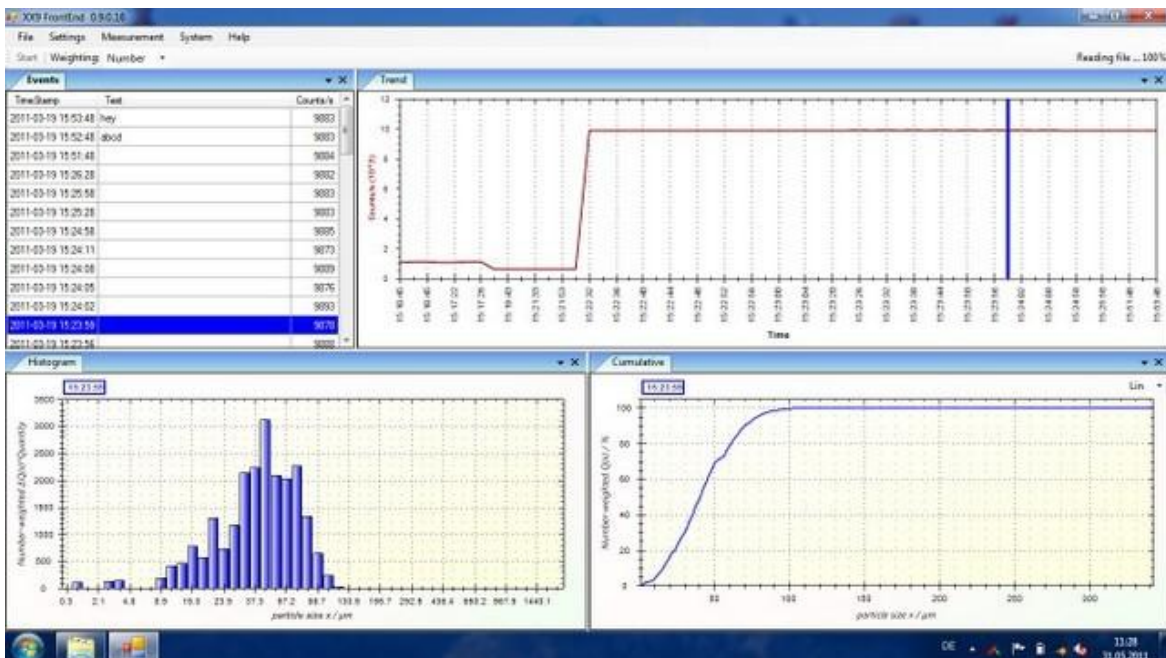
# PAT

APAS -

Sequip

APAS

MCSST.

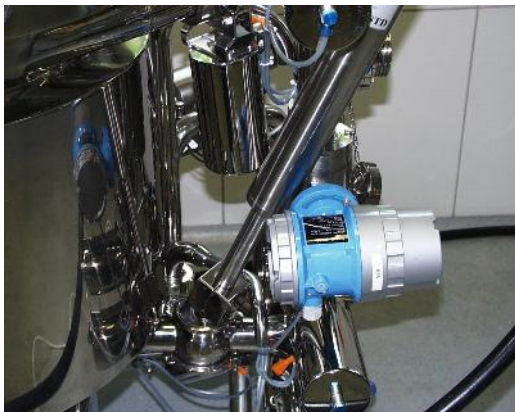




# PAT

- ⇒
- ⇒
- ⇒
- ⇒
- ⇒
- ⇒

24 / 365

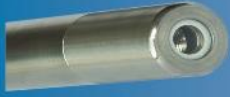


- ⇒
- ⇒
- ⇒
- ⇒
- ⇒
- ⇒
- ⇒
- ⇒

ATEX







## Measured products

	20
	<5
2 – 250	
	<125
<125	
/	
MgCl <sub>2</sub> × 6 H <sub>2</sub> O	
	1.5 3.5 %
NIVEA	
Penaten	<45
<150 μm	
	100 – 800 μm



\_\_\_\_\_ :

-

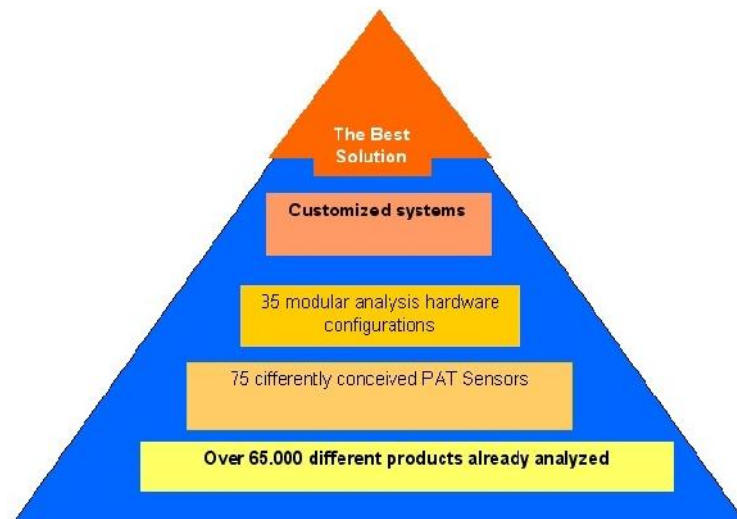
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Shell;  
Fraunhofer Institut Physikalische Prozesstechnik;  
Siemens;  
BASF;  
University Cottbus;  
Weleda;Switzerland  
TU Wismar,  
Solvay  
Sanofi  
UNIST, Ulsan, Korea  
Unilever China, Germany  
University Warsaw  
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