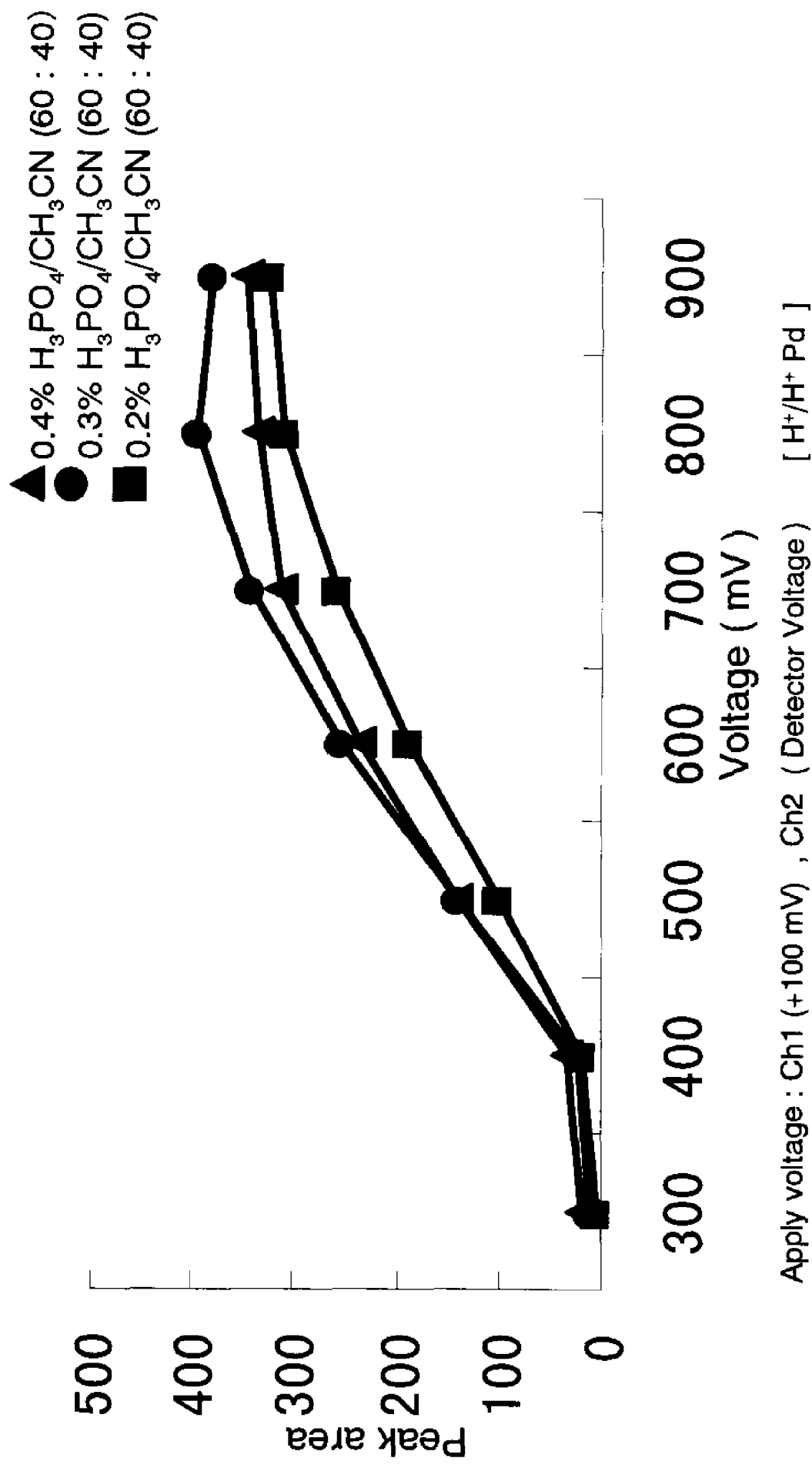
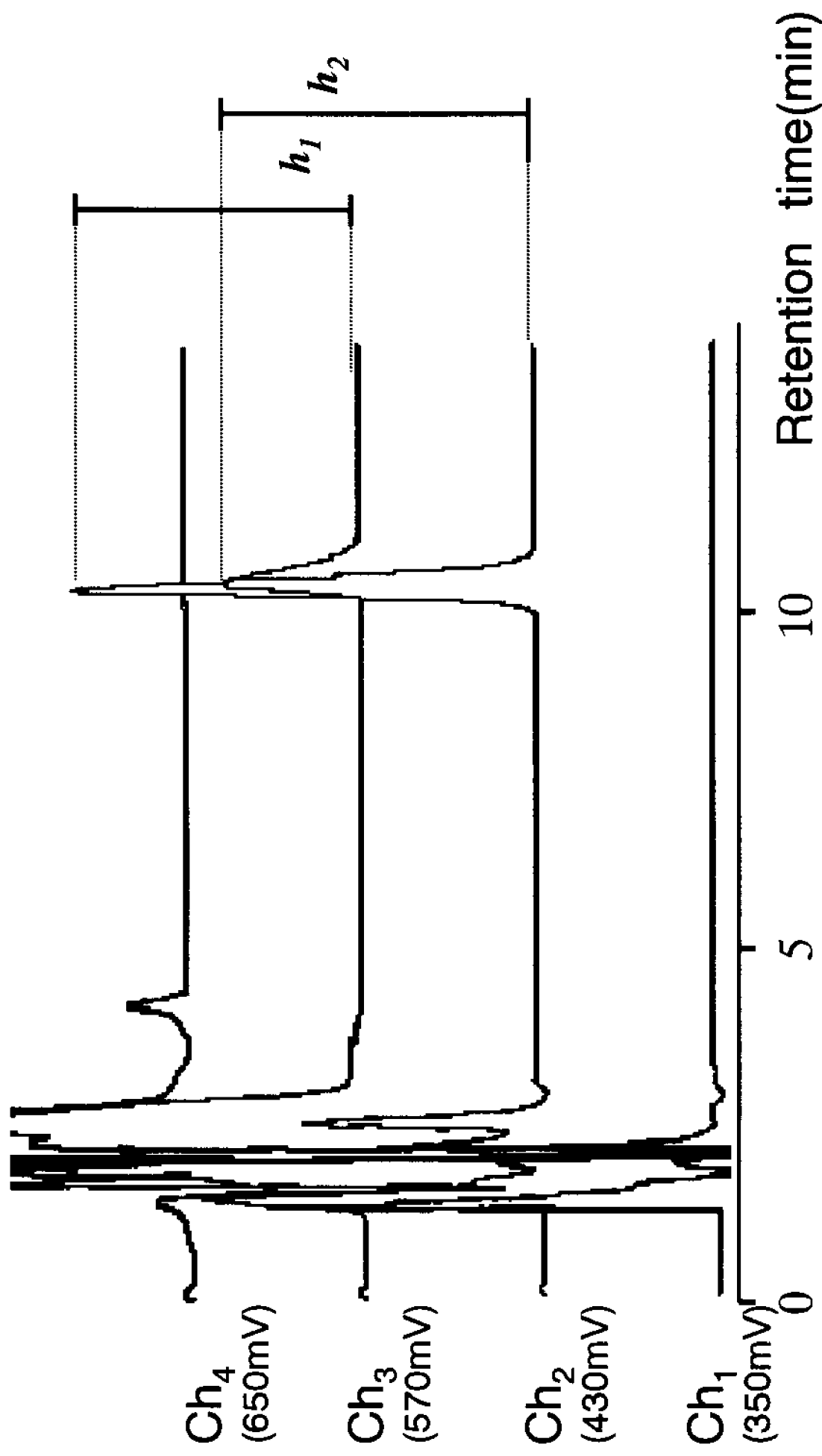


PUMP	SHIMADZU LC-10AD
Column	SHISEIDO CAPCELL PAKC <sub>18</sub> ( 4.6 × 150 mm )
Column temperature	30°C
Detector	ESA Coul Array MODEL 6210
Flow rate	1.0 mL/min
Mobile phase	0.3% H <sub>3</sub> PO <sub>4</sub> /CH <sub>3</sub> CN ( 60:40 )
Apply voltage	Ch <sub>1</sub> (+350 mV) , Ch <sub>2</sub> (+430 mV) , Ch <sub>3</sub> (+570mV) Ch <sub>4</sub> ( +650mV ) [ H <sup>+</sup> /H <sup>+</sup> Pd ]
Injection volume	50 μ L

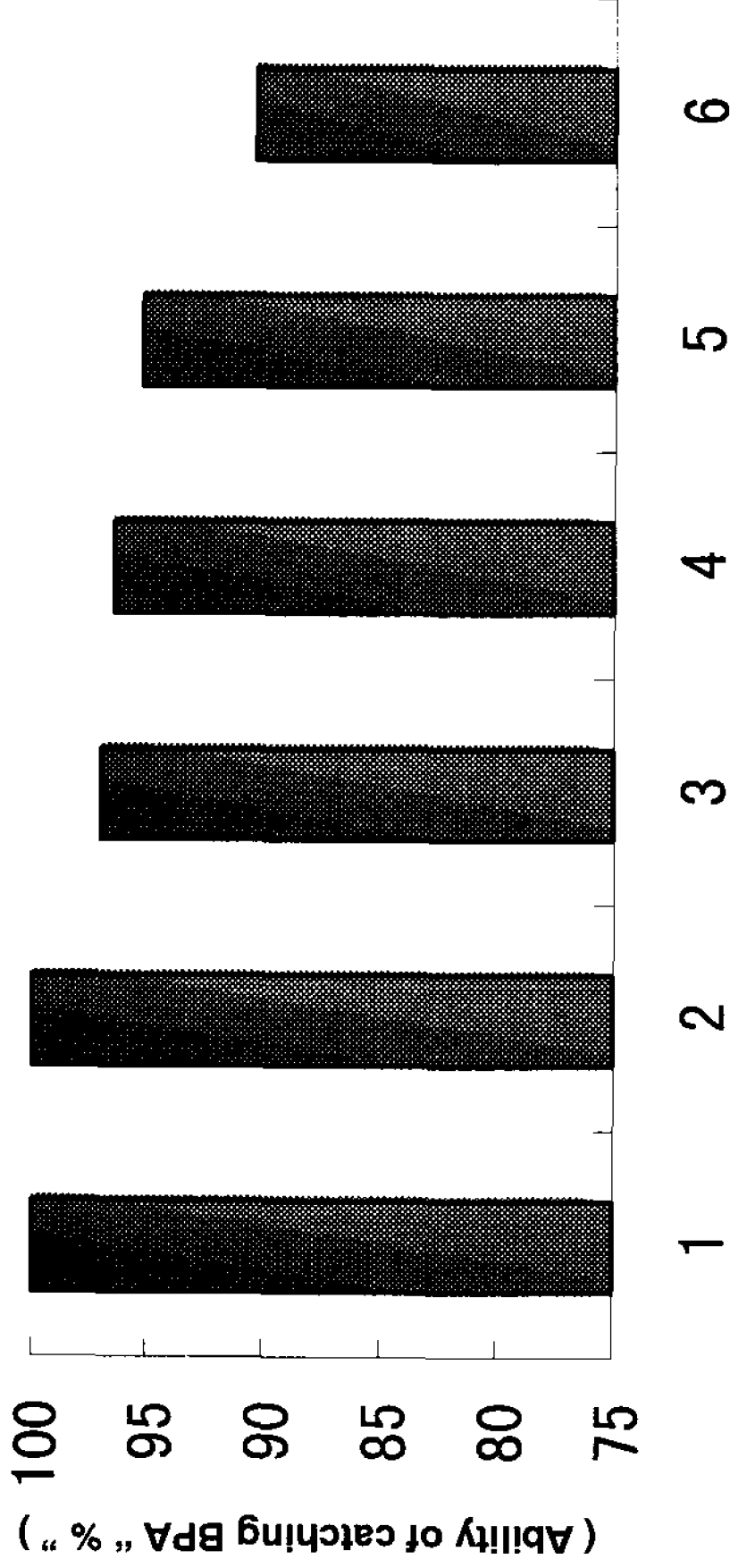
**Table 1 Analytical conditions for HPLC / Multi-electrode ECD**



**Fig.1 Effect of HPLC/ECD condition**



**Fig.2 Peak ratio of BPA standard**



「 MilliQ Water containing 0.1 ng/mL BPA was passed through  
 “Empore SDB-RBS” for trapping BPA 」

**Fig.3 Preparation of water for trapping BPA**

Water sample 600mL

- ↓  
1) 1 mol/L HCl (pH3-3.5)  
2) NaCl 4.5g

↓  
Liquid - Liquid extraction  
(Dichloromethane 30mL x 2)

↓  
Na<sub>2</sub>SO<sub>4</sub> 5g

↓  
Concentration

↓  
Reconstitute  
CH<sub>3</sub>CN/H<sub>2</sub>O (1:1) 5mL

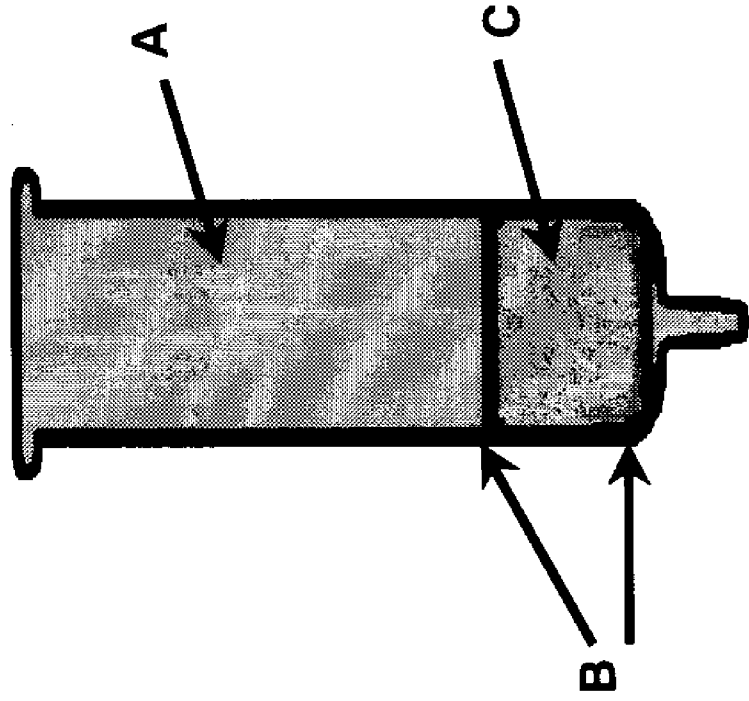
↓  
HPLC/multi-  
electrode ECD

**BPA Concentration (ng/mL)**

<b>Tap water</b>	<b>0.010</b>
<b>MilliQ water</b>	<b>0.020</b>
<b>Examination water</b>	<b>0.006</b>

(N=3)

**Fig.4 Determination of BPA in sample of laboratory waters**



**SPE cartridge sample**

CH<sub>3</sub>OH 100mL  
Room Temp. (30 min)

**Elution 10mL**

Concentration  
Reconstitute  
CH<sub>3</sub>CN/H<sub>2</sub>O (1:1) 100 μ L

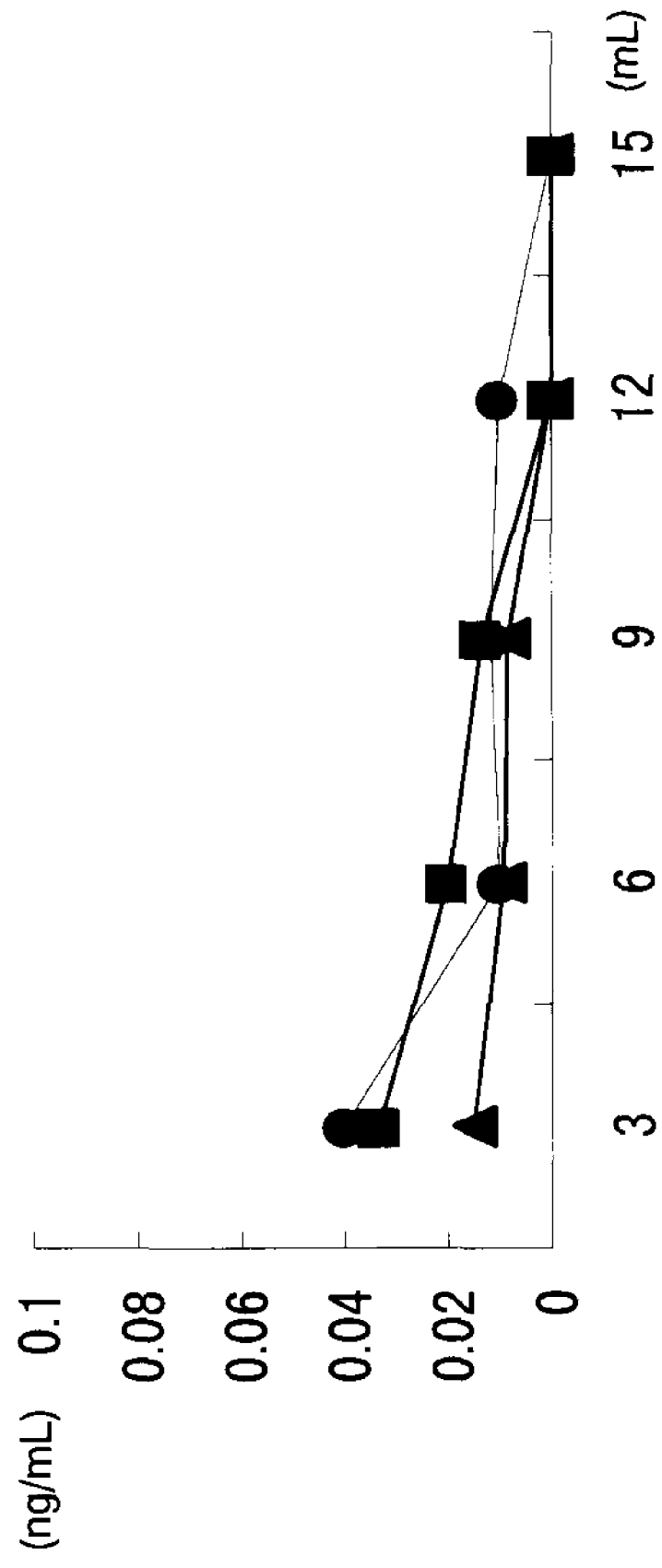
**HPLC/multi-electrode ECD**

	BPA concentration (ng/mL) [RSD %]			
	A	B	C	
OASIS HLB	[60mg/3mL]	0.013 [33.8]	0.006 [33.3]	0.011 [20.0]
Bond Elut Certify	[130mg/2.8mL]	0.013 [27.5]	0.007 [35.2]	0.010 [42.4]
Empore SDB-RPS (Disk)	[Diameter 13mm, Membrane thickness 0.5mm]		0.011 [16.4]	

(N=6)

**Fig.5 Migration of BPA from SPE Cartridges and Disk**

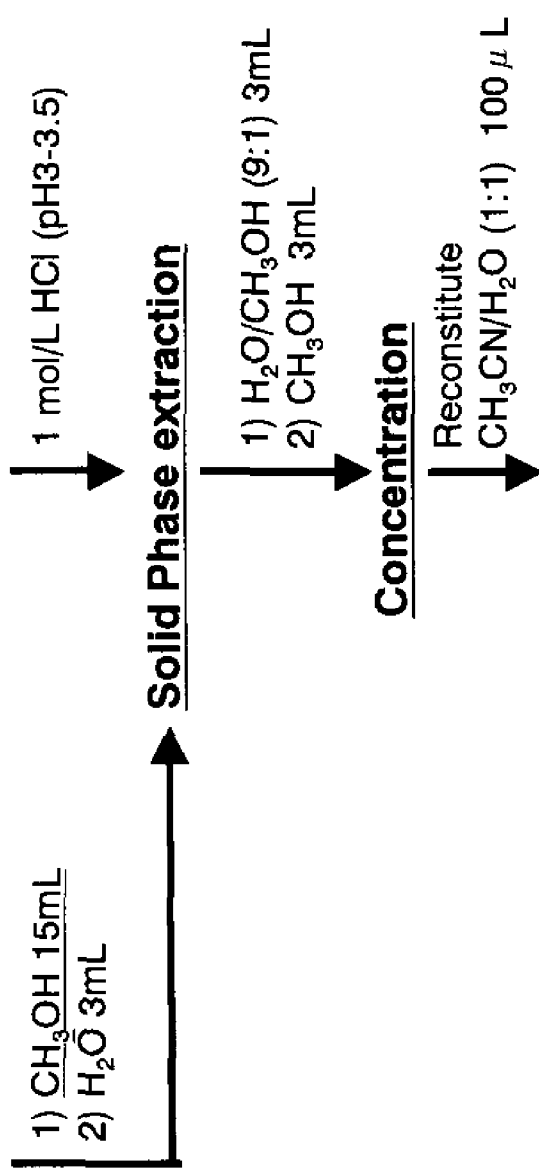
- ▲ Empore SDB-RPS (Disk)
- OASIS HLB (Cartridge)
- Bond Elut Certify (Cartridge)



**Fig.6 Remaining BPA in SPE cartridges and disk**

Water sample 10mL  
( 0.05 ng/mL and 0.5ng/mL )

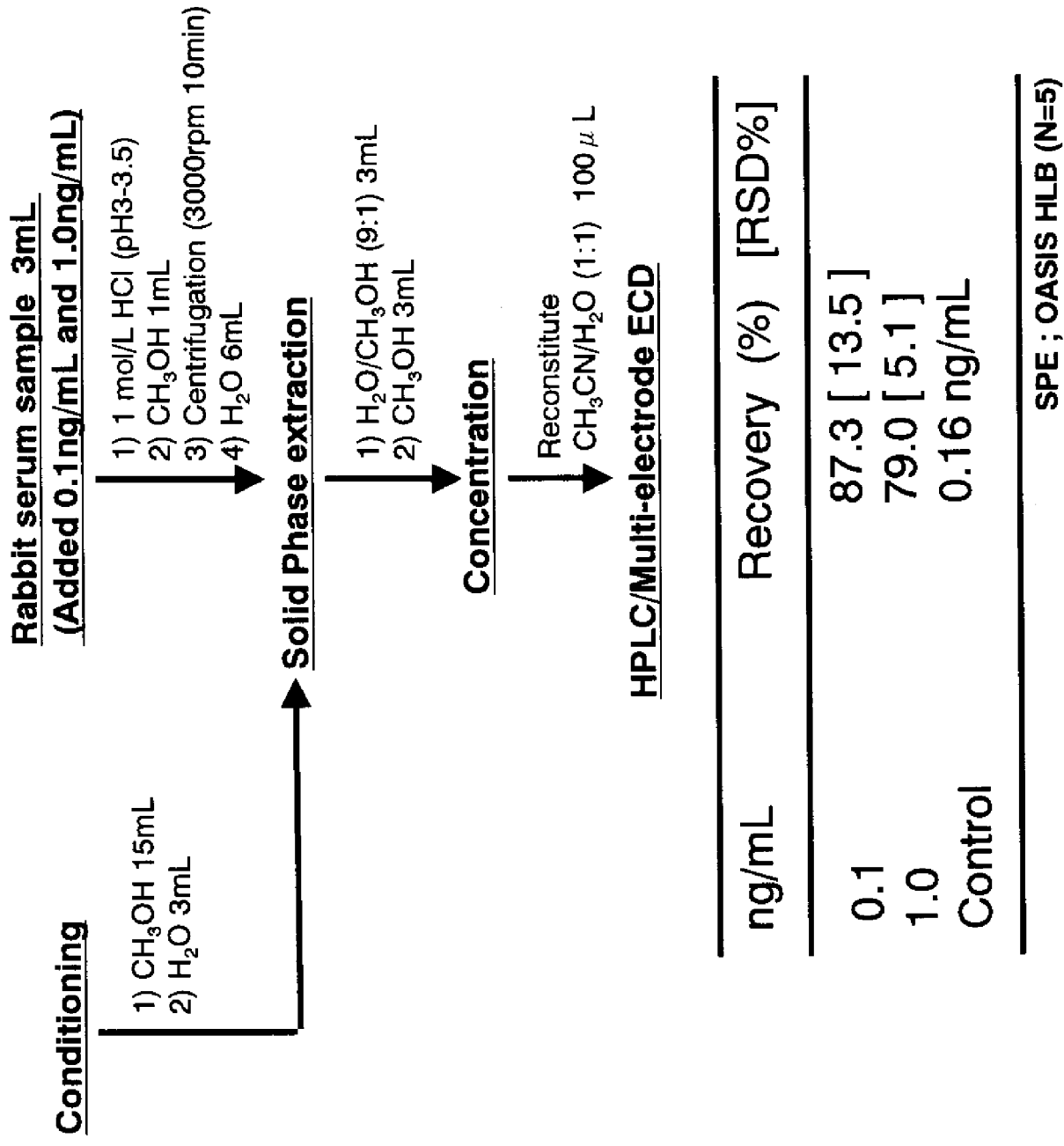
Conditioning



		<u>Recovery (%) [RSD %]</u>		
ng/mL	OASIS HLB	Bond Elut Certify	Empore SDB-RPS (Disk)	
0.05	98.2 [ 3.4 ]	92.3 [ 5.3 ]	96.3 [ 3.3 ]	
0.5	95.5 [ 6.1 ]	83.8 [ 3.5 ]	94.8 [ 5.4 ]	
Control	N.D.	N.D.	0.006ng/mL	(N=6)

**Fig.7 Recovery from water**





ng/mL	Recovery (%) [RSD%]
0.1	87.3 [ 13.5 ]
1.0	79.0 [ 5.1 ]
Control	0.16 ng/mL

SPE ; OASIS HLB (N=5)

**Fig.8 Recovery from Rabbit serum**

**BPA Concentration (ng/mL)  
[ RSD %]**

---

**Plasma sample**

**0.32  
[ 5.0 ]**

---

**\*BPA standard  $Ch_4/Ch_3 = 0.46$   
Plasma sample  $Ch_4/Ch_3 = 0.46$**

**(N=5)**

**Fig.9 Human plasma sample**