

Table 1. Percent of extraction (%E) of metal ions by conformational isomers of the thiacalix[4]arene derivatives **22-24**^a.

cations	absorption with CH ₂ Cl ₂	<i>cone-22</i>	<i>partial cone-23</i>	<i>1,3-alternate-24</i>
Li ⁺	1±1	2±1	2±1	2±1
Na ⁺	2±1	4±2	2±1	2±1
K ⁺	2±1	2±2	2±1	3±1
Cs ⁺	1±1	4±1	3±3	2±1
Al ³⁺	6±1	14±2	5±3	9±1
Fe ³⁺	28±3	25±3	35±3	28±1
Co ³⁺	5±2	95±2	21±3	6±2
Ni ²⁺	5±1	99±2	86±3	9±1
Cu ²⁺	3±1	99±2	88±3	13±1
Pb ²⁺	6±2	73±3	17±3	8±1
Ag ⁺	4±1	86±3	56±3	13±1
Cd ²⁺	5±1	94±2	22±3	9±1

± - standard deviation.

a) Extraction condition: [L] = 2.5×10⁻³ M, [MPic_n] = 2.32×10⁻⁴ M.

Table 2. Extraction constants ($\log K_{\text{ex}}$) and stoichiometry (n) of the complexes of **7-21** with silver cation formed in the organic phase^a.

	n	$\log K_{\text{ex}}$
<i>cone</i> (7)	0.94±0.05	3.26±0.09
<i>partial cone</i> (8)	0.80±0.04	3.16±0.08
<i>1,3-alternate</i> (9)	1.05±0.03	4.04±0.08
<i>cone</i> (10)	1.17±0.04	4.23±0.07
<i>partial cone</i> (11)	0.93±0.04	4.10±0.09
<i>1,3- alternate</i> (12)	0.81±0.05	3.69±0.14
<i>cone</i> (13)	0.83±0.07	3.85±0.20
<i>partial cone</i> (14)	0.82±0.08	3.72±0.31
<i>1,3- alternate</i> (15)	0.81±0.03	4.10±0.08
<i>cone</i> (16)	0.80±0.03	3.70±0.08
<i>partial cone</i> (17)	0.82±0.04	3.67±0.11
<i>1,3- alternate</i> (18)	0.88±0.03	4.04±0.08
<i>cone</i> (19)	1.21±0.08	5.42±0.19
<i>partial cone</i> (20)	0.94±0.03	4.04±0.10
<i>1,3- alternate</i> (21)	0.98±0.04	4.47±0.11

± - standard deviation.

a) Extraction condition: $[L]_{\text{org.,init}} = 10^{-4} - 2.5 \times 10^{-3} \text{ M}$, $[MPic_n]_{\text{aq.,init.}} = 2.32 \times 10^{-4} \text{ M}$.

Table 3. Extraction constants ($\log K_{\text{ex}}$) and stoichiometry (n) complexes of **22-24** with cations of p - and d - element forming in the organic phase^a.

receptor	cations	n	$\log K_{\text{ex}}$
<i>cone (22)</i>	Fe^{3+}	0.48 ± 0.02	4.99 ± 0.06
	Ni^{2+}	1.12 ± 0.08	8.05 ± 0.31
	Al^{3+}	1.61 ± 0.10	7.17 ± 0.21
	Pb^{2+}	1.56 ± 0.12	8.44 ± 0.04
	Cd^{2+}	1.88 ± 0.08	10.90 ± 0.33
	Co^{3+}	1.88 ± 0.10	10.73 ± 0.36
	Cu^{2+}	2.30 ± 0.28	13.36 ± 1.17
	Ag^+	1.99 ± 0.15	10.01 ± 0.60
<i>partial cone (23)</i>	Al^{3+}	0.93 ± 0.05	4.91 ± 0.11
	Fe^{3+}	0.81 ± 0.05	5.13 ± 0.11
	Ag^+	1.11 ± 0.04	6.06 ± 0.15
	Ni^{2+}	1.15 ± 0.08	7.09 ± 0.23
	Cu^{2+}	1.23 ± 0.11	7.48 ± 0.37
	Pb^{2+}	1.17 ± 0.07	5.94 ± 0.17
<i>1,3-alternate (24)</i>	Fe^{3+}	0.43 ± 0.14	3.82 ± 0.29
	Cu^{2+}	0.42 ± 0.03	3.68 ± 0.08
	Ag^+	1.22 ± 0.06	5.78 ± 0.21

$\pm$ - standard deviation.

a) Extraction condition: $[\text{L}]_{\text{org.,init}} = 10^{-4} - 2.5 \times 10^{-3} \text{ M}$, $[\text{MPic}_n]_{\text{aq.,init.}} = 2.32 \times 10^{-4} \text{ M}$.