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ppm

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## Study Of Effective Parameters In Solvent Extraction Of Titanium Using Cyanex923

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### Abstract

The solvent extraction of titanium(IV) from nitric acid solutions has been investigated using Cyanex923 in cyclohexane as an extractant. In this study the effects of the concentrate of nitric acid, extractant concentrate, phase ratios, various diluents such as: kerosene, toluene, benzene and cyclohexane were studied. Also, the effect of some of the associated ions, Rate and time of mixing has been studied. The results indicated that 93.14% titanium (IV) loaded with the extractant in optimum conditions as: 0. 5M Cyanex923 in cyclohexane as an extractant, mixing time 15 min and phase ratios 1:1.

**Keywords:** Solvent Extraction, Titanium, Cyanex923.

[ ]  
IVB  
% " [ ]  
( TiO<sub>2</sub>)  
[ ]  
( )  
( )  
[ ] ( )  
(D2EHPA)  
D2EHPA  
[ ]  
[ ]  
[ ] (EHEHPA)  
D2EHPA  
( )  
BDH (D2EHPA)  
( )  
ICP  
pH pH

<sup>1</sup> William Gregor  
<sup>2</sup> Kathryn Sole  
<sup>3</sup> Islam & et al  
<sup>4</sup> J. Saji and M. L. P. Reddy  
<sup>5</sup> Taichi Sato and Takato Nakamura  
<sup>6</sup> ICP Optima 2100 DV PerkinElmer  
<sup>7</sup> mixer  
<sup>8</sup> Heidolph RZR 2102 control  
<sup>9</sup> Schott CG 841

( ppm)

ICP

Fe(III) (NaOH) ( )  
 ( )  
 Fe(III) ( )  
 ( )  
 % D2EHPA  
 / pH

[ ]

	(°C)
/	(M)
	(h)
	( $\frac{L}{S}$ )
/	(M) ( )

(ppm)

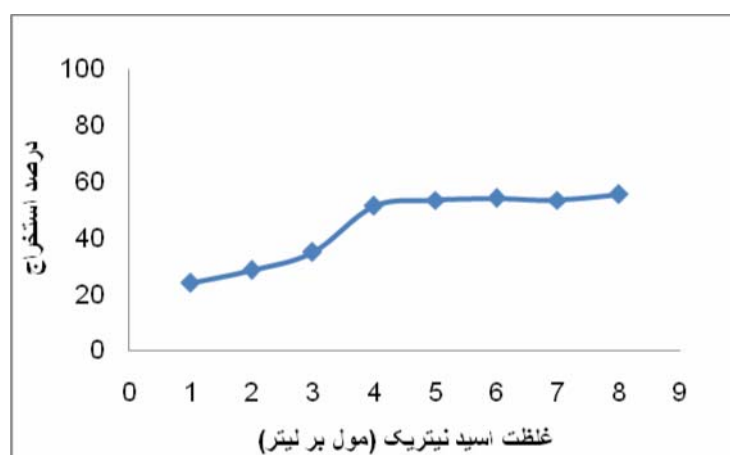
Al	Ca	Fe	Mg	Mn	Ti

(%)	
	Al(III)
	Ca(II)
/	Fe(III)
	Mg(II)
	Mn(II)

ppm

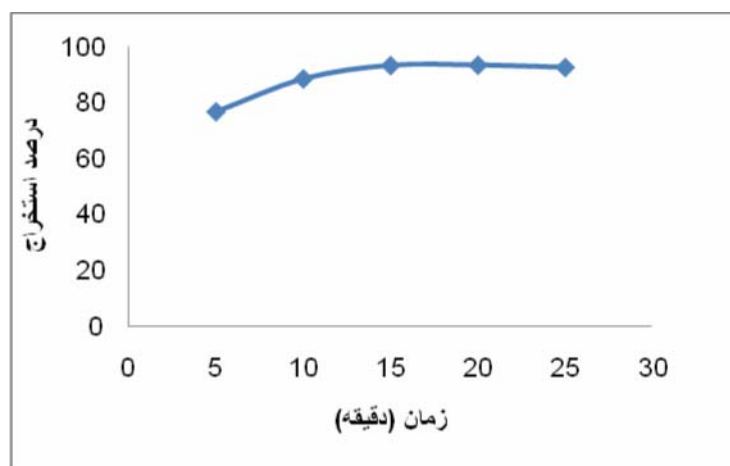
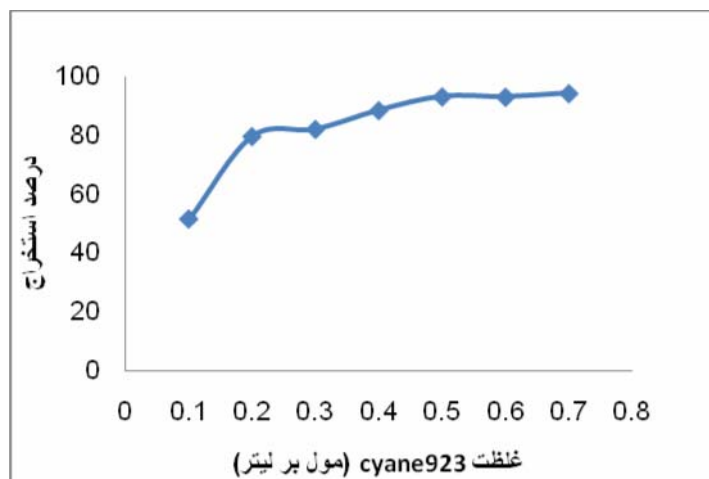
ppm

0.1M

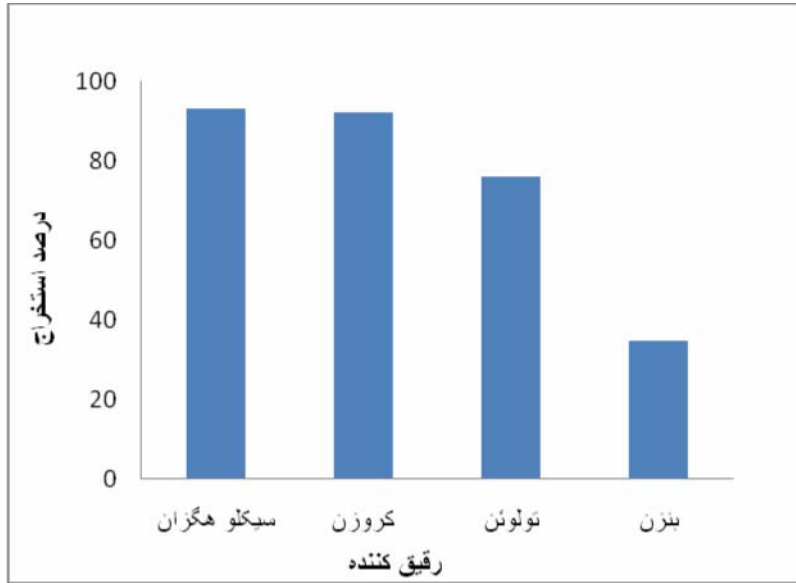


0.1M

ppm



&lt; &lt; &lt;



Cyanex923

( )	( )	(O/A)	( )	(M)	
/				/	

Cyanex923

( )	( )	(O/A)	( )	(M)	
				/	

/ : (A/O)

/ : ( ) Cyanex923

/ (

Cyanex923

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