

## عنوان مقاله:

Extraction of Molybdenum (VI) and Vanadium (V) from Nitrate Solutions Using Coupling of Acid and Solvating Extractants (RESEARCH NOTE)

## محل انتشار:

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## نویسندگان:

Mehdi Asadollahzadeh - *Materials and Nuclear Fuel Research School, Nuclear Science and Technology Research Institute*

Benyamin Shakib - *Department of Energy Engineering, Sharif University of Technology, P.O. Box 11365-8639, Tehran, Iran*

Meisam Torab-Mostaedi - *Nuclear Fuel Cycle Research School, Nuclear Science and Technology Research Institute*

Mohammad Outokesh - *Department of Energy Engineering, Sharif University of Technology, P.O. Box 11365-8639, Tehran, Iran*

## خلاصه مقاله:

In this study, solvent extraction method has been utilized for separation of molybdenum and vanadium from nitrate solution by utilizing coupling of acid and solvating extractants (D2EHPA and TBP extractants). The outcomes demonstrated that synergistic solvent extraction improves stability of formatted complexes for transfer to the organic phase. The main parameters such as pH value, concentration of extractants, NH<sub>4</sub>OH concentration as the stripping agent and contact time were optimized at 0.4, 15% (v/v) D2EHPA, 10% (v/v) TBP, 2 M and 30 min, respectively. The maximum separation factor of 24.84 was obtained with a new synergistic mixture of D2EHPA and TBP diluted with kerosene. According to McCabe-Thiel diagram, more than 99% of the Mo (VI) was obtained in counter current procedure and three stage numbers using 15% (v/v) D2EHPA and its mixture with 10% (v/v) TBP in kerosene, initial aqueous pH value equal to 0.4 and A/O ratio of 4/1 at room temperature for 30 min. In addition, stripping of Mo (VI) reached 98.75% in three counter current stages using 2 M NH<sub>4</sub>OH as stripping agent and A/O ratio of 1/4 for 30 min.

## کلمات کلیدی:

Molybdenum, Vanadium, Coupling Extractants, Separation factor, Solvent extraction, Synergism

## لینک ثابت مقاله در پایگاه سیویلیکا:

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