September 26, 2023

Sales launch of a new reagent product “CPs-HP50”, a precious metal scavenger

Realizing high-efficient absorption treatment of precious metals with different valences contributing to precious metal recycle

N.E. CHEMCAT CORPORATION, (Head office: Minato-ku, Tokyo; President/Representative Director Susumu Endo) has launched the reagent sales of a new product “CPs-HP50” from Precious Metal Scavenger CPs series.

CPs-HP50 is a silica powder scavenger combining the characteristics of thiol-based scavenger and amine-based scavenger. This product allows high-efficient absorption treatment of a variety of precious metals contained in solutions after catalytic reactions of precious metals.

Three characteristics of this product

1: High absorption removal rate for a variety of precious metals

CPs-HP50 allows you to absorb and remove rare metals including palladium (Pd), platinum (Pt), rhodium (Rh), or ruthenium (Ru) in organic solvents such as toluene, methylene chloride, and ethanol.

Metal Type	Catalyst	Solvent	Adsorption removal rate
Pd	$Pd(OAc)_2$	THF	> 99.9%
Pd	$PdCl_2(dppf)$	CH_2Cl_2	73.7%
Pd	[Pd2(dba)3] ・ xdba	CH_2Cl_2	> 99.9%
Pt	Karstedt’s catalyst	EtOH	99.2%
Rh	$[Rh(acac)(CO)_2]$	Toluene	> 99.9%
Ru	$[RuCl_2(p\text{-cymene})]_2$	CH2Cl2	＞ 97.0%

2: Single product to absorb precious metals with various valences

In contrast to conventional absorption of precious metals where different scavengers of thiol-based and amine-based scavengers have to be used according to valence of the metal, this product can achieve high rate of absorption removal in mix solvent containing precious metals with differing valences. This will lead to reduction in man-hour lowering your cost and time.

	① $PdCl_2(dppf)$	② $[Pd_2(dba)_3]$ ・ xdba	③ Mixed (①+②)
CPs-HP50	73.7%	＞ 99.9%	97.7%
CPs-T	26.2%	＞ 99.9%	90.7%
CPs-DA	48.7%	84.9%	89.5%

3: Can be used in columns

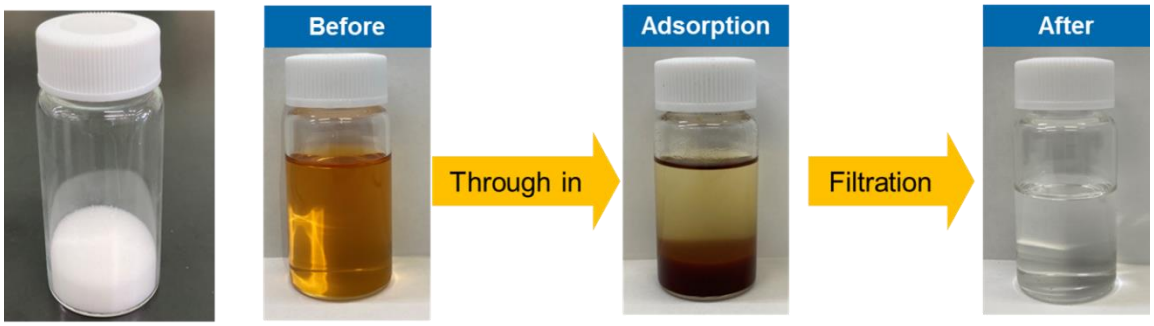
With a good permeability, CPs-HP50 can be used in columns. In our test, a solution containing palladium with a concentration of 975ppm was added and circulated in a syringe filled with this product and the concentration lowered to less than 1ppm.

With these characteristics, CPs-HP50 supports removal of trace amount of precious metal from chemical compounds which has seen increasing demands in pharmaceutical production due to the stricter regulations of elemental impurities guideline.

Moreover, CPs-HP50 can be used for recycling of precious metal in fine-chemical

production of for example agricultural chemicals or electronics materials leading to cost reduction through resource cycling and reuse of rare precious metals.

■Product image



■About N.E. CHEMCAT CORPORATION
Founded in 1964, N.E. CHEMCAT CORPORATION is engaged in the development, manufacturing, and distribution of chemical catalysts, auto exhaust catalysts (including three-way catalysts and diesel auto catalysts), and fuel cell catalysts, and collection/refinement of precious metal catalysts.

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