



A Quick Look into Tellurium: The Latest Pawn in China's Key Mineral Export Controls — 05 Feb 2025, Johannes Natterer

China has announced export controls on a further range of products, including Tungsten, Tellurium, Ruthenium, Molybdenum, and Ruthenium. Whilst none of these metals are so-called rare Earth metals, for which — as it is widely known — China has a dominant position, China's market share in the production of these metals is equally awe-inspiring.

A quick look into Tellurium illustrates this. The annual global production volume of Tellurium is around 700 tons, with China accounting for around 70%, followed with a wide margin by Russia, Japan, Sweden and Canada. Tellurium is produced as a side product of copper production (and the 700 tons equate to around 0.003% of global copper production). The minerals used for copper production contain about 2% copper and around 1g per ton of Tellurium. This is very little, but already about 300 times more concentrated than the average Tellurium in the Earth crust, Tellurium being about as present as gold.

In other words, upon processing of 1 ton of minerals, one can get about 20kg of copper and 1gm of Tellurium. In the production process of Tellurium, one first isolates the anode slime of the copper production (the materials collected at the anode of an electrolytical production step in the copper production), dissolves this slime in strong acids, then selectively precipitates the desired Tellurium as a Tellurium salt, further followed by isolation via, for example, solvent extraction, reduction to the metal and subsequent electrolytic refining for purification.

These are all separate processes requiring different assets, lots of energy, auxiliary chemicals, and labour and that produce significant amounts of waste going to landfill.

So far only China has been willing to fully delve into running such processes, to turn the few grams into tons. Western copper production facilities customarily either discard or pass the anode slime over to other facilities globally for extraction and purification, and do not seek to run these tedious processes themselves.

Tellurium is used in a wide range of applications from solar cells to alloys and is widely regarded as a critical material. **Not having access to it could complicate things...**

We regularly publish Articles and [Chemical Reactions](#) on subjects that relate to the Chemical Industry and M&A in general. [Subscribe here.](#)

ABOUT NATRIUM CAPITAL

Natrium Capital Limited is the specialist Chemicals M&A boutique which sets a new standard in M&A advice. Led by Alasdair Nisbet and staffed by bankers, all of whom are also scientists, Natrium Capital provides strategic and M&A transaction services focused on the chemical industry, covering, amongst others: plastics, fine and specialty chemicals, personal care ingredients, food ingredients, chemical distribution, engineering materials, paints and coatings, inks, adhesives, biotechnology and clean technologies. Headquartered in London (UK), Natrium Capital advises on both sell-side and buy-side transactions, including carve-outs and complex global cross-border deals. The team has advised on transactions with a combined value of over \$100bn.

Natrium Capital is authorised and regulated by the Financial Conduct Authority.

JOHANNES NATTERER, SENIOR ADVISOR

johannes.natterer@natriumcapital.com

[CONTACT THE TEAM BY CLICKING HERE](#)

The information and views contained in this report were prepared by Natrium Capital Limited. It is not a research report, as such term is defined by applicable law and regulations, and is provided for information purposes only. No part of this material may be copied or duplicated in any form or by any means, or redistributed, without Natrium Capital Limited's prior written consent. For a full disclaimer see www.natriumcapital.com/disclaimer.

Copyright © 2025 Natrium Capital Limited. All rights reserved. www.natriumcapital.com