

Struvite Precipitation and Simultaneous Ammonia Removal – Jan Suschka, Sebastian Popławski
Summary

Anaerobic digested sludge supernatant is rich in phosphates and ammonia nitrogen. Phosphates can be almost completely removed in the process of struvite precipitation. Simultaneously, if only magnesium is supplied, usually only a minor part of ammonia equivalent to phosphates will be removed. Increase in pH to about 8.5 or above leads to the presence of free ammonia which affects the struvite crystals form. The possibility of additional ammonia removal with an external or internal source of phosphates was also accounted for. The final product (precipitate) could be considered as a “biofertilizer” or “biosoil” in connection to the technology applied.