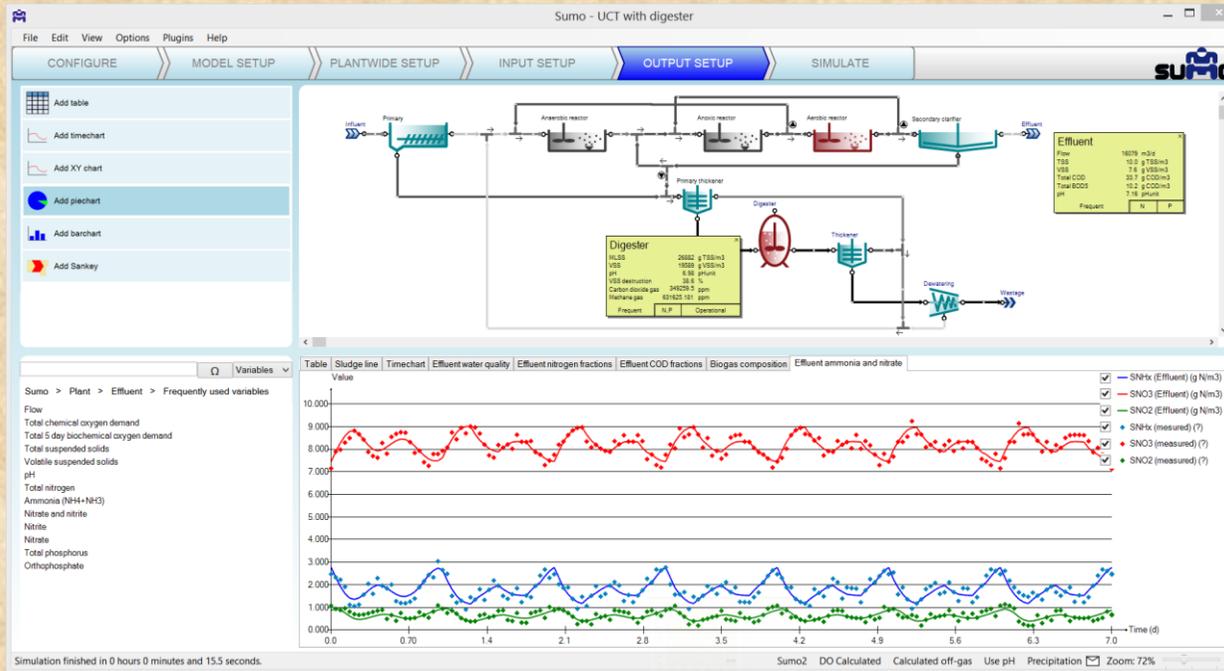


The Sumo[®] full featured Wastewater Process Simulator

Why choose Sumo?



- **Only task-flow based simulator¹** in the world made to work as engineers do
- **Only open process source commercial simulator¹** (models, mass balances, all equations in Excel tabular format in SumoSlang™)
- **Virtually unlimited activated sludge/anaerobic digester/sidestream treatment configurations available²**
- **Integrated steady-state and dynamic simulations, 2-way link to Excel, popups, sticky notes, undo(!)**

- **Only simulator that allows complete flexibility to build your own models** or modify any models in Sumo
- **Fast! Very fast!** Ask for more details

www.dynamita.com info@dynamita.com

Single license 1800 €³ per annum including support⁴

¹To our best knowledge

²If we don't have it, we build it. Timeline and development cost (if any) is case specific

³We reserve the right to change pricing

⁴Volume discounts, educational and network licenses are available



Technical specifications

| Biokinetic/chemical models | Process units/configurations | Strong points |
|---|--|---|
| <p>Sumo models (Dynamita in-house researched/developed)</p> <ul style="list-style-type: none"> • Sludge production and oxygen uptake • One step nitrification/denitrification • Two step nitrification/denitrification, anammox • High-rate process, flocculation • Bio-P • Fermentation, anaerobic digestion • Chemical P removal • Struvite and other precipitates, nutrient recovery • Greenhouse gases • Methanol dosing • Aeration • pH, alkalinity • Gas transfer, stripping • Control (on-off, ratio, PID) <p>Museum models</p> <ul style="list-style-type: none"> • ASM1 • ASM2d (original or with TUD bio-P) • ASM3 (w/wo bio-P) • Barker-Dold • ADM1 <p>Other models</p> <ul style="list-style-type: none"> • UCTPHO+ (UCT) • BNRM2 (CALAGUA Research Group) <p>Your own models</p> <ul style="list-style-type: none"> • Model editor/automated mass balance check • Dedicated process engineering/research support • SumoSlang – built in intuitive simulation language for any dynamic or algebraic model | <p>Easy, flexible influent specification</p> <p>Reactors</p> <ul style="list-style-type: none"> • All types of activated sludge reactors (CSTRs, PFRs, oxidation ditches, SBRs, etc.) • Fermenters • Anaerobic digesters • Sidestream reactors • MBBR, IFAS, Moving Carrier <p>Phase separators</p> <ul style="list-style-type: none"> • Primary, secondary settlers, • Thickeners, centrifuges, cyclone, dewatering, etc. <p>Other units</p> <ul style="list-style-type: none"> • Thermal hydrolysis process • DO, MLSS, SRT, pH, ORP control <p>Flow control elements</p> <ul style="list-style-type: none"> • Pumps, bypass weirs, channels • Flow combiners/dividers <p>Configurations</p> <ul style="list-style-type: none"> • Unlimited complexity (largest plants in the world have been modelled) • Typical example plants (MLE, UCT, SBRs, AS+Digester, whole plant with sidestream treatment, etc.) provided with software • Main stream deammonification • AB process • Thermal hydrolysis + digestion • and many others | <p>Easiest software to get up to speed with</p> <ul style="list-style-type: none"> • GUI Windows 7, 8.x, 10 based (compiled models platform independent) • Unique, user friendly task-flow based software design, undo, Excel report • Expert support in process software • Training courses, technology transfer • Sumo team co-authored books (WERF Influent Characterization Manual, Good Modelling Practice Guidelines, various MOPs) • Industry standard layered settling model for all types of settlers, clarifiers, thickeners • Open API connection to 3rd party apps and databases <p>Excel toolkit complementing Sumo (included)</p> <ul style="list-style-type: none"> • Dynamita Influent Tool • Dynamita High F/M Tool (Autotrophic growth rate evaluator) • Dynamita OUR tool • Dynamita Influent Active Biomass Tool • Dynamita DSRT Tool (Do you know your sludge age?) • Dynamita K_La Tool <p>Offices</p> <ul style="list-style-type: none"> • Western Europe (France, Austria) • North America (Canada) • Eastern Europe (Hungary) |