

COMSTAT 2.1 README

Release date July 1 2015

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Terms for use (how to reference Comstat2)

If you use Comstat2 in any work, such as, but not limited to, peer reviewed papers, we require that you acknowledge the use of the program. At the time of writing this README file we are preparing a paper describing Comstat2, but no such paper exist at this time. Until that paper is published we ask that use these references:

The original Comstat1 paper (Heydorn et al., 2000), Comstat2 project (Vorregaard, 2008) and <http://www.comstat.dk>.

When the paper describing the Comstat2 program is published, we will put the reference on the comstat2 web site (www.comstat.dk) along with an updated manual and instructions for referencing the software. *Please note that the instructions on www.comstat.dk have precedence over any other information like this README file.*

Release notes

Version 2.1 13-March-2015

New: The program tries to detect correct format for decimal comma automatically.

New: The automatic threshold is selected per default.

New: Time stamp is added to all data points in the output files.

New: Includes macro to batch convert stacks to OME-TIFF (not part of Comstat2)

Fixed: Correctly reads and processes OME-TIFF files.

Fixed: The program sometimes stalled mid way in an analysis. This has now been fixed, although it is occasionally seen (due to memory exhaustion).

Version 2.1 14-April-2015

New: The Thickness Distribution now outputs average height per observed area and average height of biomass. The previous versions only output average per observed area.

New: Manual available.

New: *Surface Area* actually outputs surface area (was area/volume)

Fixed: Output data from *Area Occupied in Layers* horizontally

Version 2.1 9-June-2015

Fixed: Extraneous output from *Microcolonies at Substratum*

Fixed: Empty “ghost colonies” removed from output of *Runlength*

Fixed: *Surface Area* calculation

Version 2.1 19-June-2015

Fixed: An issue where only one (the last) data point was written from certain features if *Append to Output Files* was selected together with *Fractal Dimension*.

Version 2.1 28-June-2015

Fixed: An issue where the *Roughness Coefficient* was not written to the corresponding output file.

Version 2.1 1-July-2015

Changed: All output files have been updated to have the same layout

LOCI Tools compatibility

Version 2.1 1-July-2015

This version only runs with LOCI Tools version 5.0.0 – 5.0.8

Known Issues

Version 2.1 1-July-2015

We are not aware of any bugs in this version. However, if you come across any bugs, please report them to us (comstat@comstat.dk)

References

- Heydorn, A., Nielsen, A. T., Hentzer, M., Sternberg, C., Givskov, M., Ersboll, B. K., & Molin, S. (2000). Quantification of biofilm structures by the novel computer program COMSTAT. *Microbiology*, 146 (Pt 10), 2395-2407.
- Vorregaard, M. (2008). *Comstat2 - a modern 3D image analysis environment for biofilms*. (Master of Science Master thesis), Technical University of Denmark, Kongens Lyngby, Denmark.

Contact

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See also <http://www.comstat.dk>