biochemical (biological) oxygen demand (BOD)

The amount of oxygen, divided by the volume of the system, taken up through the respiratory activity of microorganisms growing on the organic compounds present in the sample (e.g. water or sludge) when incubated at a specified temperature (usually $20 \,^{\circ}$ C) for a fixed period (usually 5 days, BOD₅). It is a measure of that organic pollution of water which can be degraded biologically. In practice, it is usually expressed in milligrams O₂ per litre.

Source:

PAC, 1992, 64, 143 (Glossary for chemists of terms used in biotechnology (IUPAC Recommendations 1992)) on page 148