

Comparative physiometry of the mechanics of breathing in mammals

Günther,

de la Barra, B.León

Dimensional analysis and the theory of biological similarities were applied to the mammalian respiratory system. Through dimensional and solution matrices a set of 9 Pi-numbers of Buckingham was obtained. Products of dimensionless numbers lead to 12 invariant numbers of physiological significance. Quantitative solutions of these invariant numbers were calculated from the corresponding allometric equations derived from interspecific experimental data. © 1967.