

Laboratory of Microbiology, University
Santiago de Compostela
(Spain)

Influence of composition of culture medium on the enzymatic action of bacteria *

by
Benito Reguciro and Ramona Vaamonde

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We determined action phosphatase, RN-ase and DR-ase in filtrates of *Escherichia coli*, grown in a synthetic medium, during 48 hours at 28°, in a shaker-machine. We use as substratum RNA and DRA obtained from the bacteria grown under same medium and conditions. The purpose is to see the relation between enzymatic activity and composition of the medium.

Filtrates of *E. coli* in synthetic medium, complete or without Fe^{++} present phosphatase and RN-ase activity when we use as substratum, commercial RNA. They do not present any activity in case of lack of any phosphate or Mg^{++} .

Same filtrates in complete synthetic medium or medium without phosphate, Mg^{++} , Fe^{++} , only present phosphatase and RN-ase activity in presence of RNA proceeding from *E. coli* of same medium. There is not activity when RNA proceeding from medium without phosphate. Same filtrates from complete or incomplete synthetic medium, present phosphatase and RN-ase activity on RNA proceeding from *E. coli* grown in broth, if the RNA proceeding from *Sarcina lutea* grown in broth, there are RN-ase activity, but not phosphatase. Filtrates of *E. Coli* grown in broth, present RN-ase activity, over all the RNA proceeding from *E. coli* grown in synthetic medium, complete or incomplete; filtrates of *Sarcina lutea* grown in broth present this activity only on RNA proceeding from *E. coli* grown in synthetic medium without Mg^{++} or Fe^{++} .

In all the experiences realised to see DR-ase activity, we obtain negative results.

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