REVISION OF THE HOLOTYPE STRAIN OF
DESULFOTOMACULUM RUMINIS
(COLEMAN) CAMPBELL AND POSTGATE

L. Leon Campbell and J.R. Postgate

Department of Microbiology, University of Illinois,
Urbana, Illinois 61801, and
Unit of Nitrogen Fixation, University of Sussex,
Falmer, Sussex, England

ABSTRACT. The holotype strain of this genus is Coleman's strain 'DL,' NCIB 8452. Coleman's strain 42 is a cotype strain with the NCIB number 10, 149.

- - - - -

Campbell and Postgate (1965) reclassified the spore-forming sulfate-reducing bacteria within a new genus, Desulfotomaculum, and assigned Coleman's mesophilic sporulating strains (Coleman 1960) to the species D. ruminis on the basis of serological and other evidence published earlier (Postgate and Campbell 1963). As a result of correspondence with the National Collection of Industrial Bacteria and with G.S. Coleman we learn that the strain we believed to be 'Coleman 42' and designated NCIB 8452 was in fact Coleman's strain 'DL'. Coleman's strain 'DL' thus becomes the holotype species, retaining the same NCIB number.

Strain '42' has now been obtained from G.S. Coleman and deposited with the NCIB, who have assigned it the number 10, 149. It appears closely similar to strain 'DL', as Coleman claimed, in the following properties: (1) morphology; (2) absence of desulfovibrin (Postgate 1959); (3) ability to grow in specialized media containing lactate, pyruvate, or formate (but not acetate) plus sulfate, and produces H₂S (Campbell and Postgate 1965); (4) it has a deoxyribonucleic acid base composition of 45.2% guanine plus cytosine as calculated from CsCl density gradient centrifugation data; and (5) it shows immunological "identity" with strain 'DL' when tested against 'DL' antiserum by the immunodiffusion procedure (Postgate and Campbell 1963). Thus it has the status of a co-type strain of the species.

ACKNOWLEDGEMENT

We thank Joan Sprague for her excellent technical assistance. This work was supported by Public Health Service Grant AI-04673 from the National Institute of Allergy and Infectious Diseases.

REFERENCES

- Campbell, L. L. and J. R. Postgate. 1965. Classification of the spore-forming sulfate-reducing bacteria. *Bacteriol. Rev.* 29:359-363.
- Coleman, G. S. 1960. A sulphate-reducing bacterium from the sheep rumen. *J. gen. Microbiol.* 22:423-436.
- Postgate, J. R. 1959. A diagnostic reaction of Desulphovibrio desulphuricans. *Nature, London* 183:481.
- _____ and L. L. Campbell. 1963. Identification of Coleman's sulfate-reducing bacterium as a mesophilic relative of Clostridium nigrificans. *J. Bacteriol.* 86:274-279.