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Letters to the Editor

Use of API NH System for Identification of *Moraxella catarrhalis*

Barbe and coworkers tested 318 isolates of *Haemophilus* and *Neisseria* species as well as *Moraxella catarrhalis* in an evaluation of the API NH kit in a study primarily addressing the ability of that kit to accurately identify organisms in its intended area of application (1).

They found that only 1 of the 305 strains that were included in the kit database was identified incorrectly, and of the 13 isolates tested that were not in the database, 3 were not identified and the rest were incorrectly identified.

It is unfortunate that strains of *Moraxella* species were not included in the study, because a problem that we have encountered may have come to light (8). We have previously described the identification of an isolate of *Moraxella osloensis* as *M. catarrhalis* with this kit. Since then, we have seen two further genital tract isolates of *Moraxella* species also misidentified as *M. catarrhalis*.

The tributyrin test is important for identification of *M. catarrhalis* (5), and the lipase cupule in the API NH kit may detect the enzyme responsible for tributyrin hydrolysis (7). The authors recognize that a positive lipase test does allow *M. catarrhalis* to be differentiated from *Neisseria* and *Haemophilus* species. Unfortunately, it is not widely recognized that many other *Moraxella* species also produce an enzyme capable of hydrolyzing the triglyceride tributyrin (3).

Although any laboratory test has the potential to give misleading results, the dangers that this poses to laboratory workers is often underemphasized. One of us has previously worked with a blood culture isolate of *Brucella melitensis* which was designated *Moraxella phenylpyruvica* by a similar gallery strip test kit (the API 20E system) before its final identity was recognized (6). The authors emphasize the importance of using a heavy standardized suspension to inoculate the cupules. Potential users of the kit should be aware of the risks that this may pose to operators, especially as the kit is intended for use with organisms capable of causing infections by the airborne route. Reports of staff acquiring meningococcal infections (and brucellosis), probably by exposure in this manner, have already been documented (2, 4).

In the past, identification tests and kits deemed suitable for *M. catarrhalis* have been evaluated against isolates of this and *Neisseria* species. It would seem appropriate to include strains of *Moraxella* species when tests aimed at identifying *M. catarrhalis* are evaluated.

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Author's Reply

Indeed, it would have been worth testing all the species of *Moraxella*. Only *M. catarrhalis* has been studied, as this species is the most frequently encountered in medical biology.

In routine practice, it is important to take into account the clinical origin of the sample. It is effectively known that other *Moraxella* species can be encountered in the genital sphere.

We have pointed out the importance of the morphology of the bacteria when performing Gram staining: *M. catarrhalis* strains are always shaped as gram-negative cocci, whereas for other species a coccobacillary shape is commonly encountered. If even a small doubt concerning the morphology remains, a culture in liquid medium should be done, and even a Catlin test (1) should be performed to make sure that cocci are involved instead of bacilli.

This strip allows discrimination between *M. catarrhalis* and *Neisseria* spp. rather than between different species of *Moraxella*. Even if the issue raised in this letter is not often encountered in clinical laboratories, the remarks of Peiris et al. are quite pertinent. Therefore, the next version of the API NH profile list, as well as the associated identification software, will include a note in front of any *M. catarrhalis* entry indicating the possibility of another *Moraxella* species. Additional tests will then have to be performed to complete the identification.

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