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Letter to the Editor

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Suspension of *Arthroderma* and *Trichophyton* species in RPMI-1640 medium provided long-term viability at room temperature

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To the Editor:

Research on dermatophytic fungi requires taxonomically well-defined strains. Furthermore, the long-term preservation of certain human pathogenic dermatophytes is crucial for mycological investigations. Subculturing is time-consuming, prone to contamination, and impractical, especially in routine practice. Although strain preservation under mineral oil, silica gel, soil, sand, or sterile water has been successful, periodic subculturing of these preserved strains is a major problem in laboratories with limited funds. Therefore, modified protocols of basic lyophilization and cryopreservation are the recommended storage methods in these settings (1).

In June 2008, we lyophilized standard dermatophyte species in sterile water in clear glass vials (AIM SV-15B) for vibrational spectroscopy analysis (2). The strains used were obtained from the reference collection of the CBS-KNAW Fungal Biodiversity Centre (CBS; Utrecht, the Netherlands); the strains along with their reference numbers are listed in the Table. Following the study period, 18 dermatophyte strains were resuspended with RPMI-1640 (with glutamine and without sodium bicarbonate, Sigma R6504). All suspensions were stored in a laboratory at room temperature, avoiding direct sunlight.

In March 2014, after about 6 years in storage, 15 (83.3%) of the 18 *Trichophyton* species were successfully subcultured onto Sabouraud glucose agar (HiMedia, India; without cycloheximide and chloramphenicol) (Table). Neither bacterial nor mold contamination was observed.

In clinical mycology laboratories, RPMI-1640 medium is routinely used in antifungal susceptibility testing (3). However, the incidental and unexpected findings of this study indicate that RPMI-1640 medium may also be suitable for strain preservation of *Trichophyton* species and its teleomorphs, i.e. *Arthroderma* spp. Moreover, because of its low cost, this method would be useful for most laboratories, in particular for analyses that require long-term strain preservation, such as antifungal susceptibility testing, strain quality control evaluations, or molecular investigations.

Table. Viability testing results for *Arthroderma* and *Trichophyton* species stored in RPMI-1640 medium.

Species	CBS No.	Result
Arthroderma strains		
A. simiii (MT–)	417.65	+
A. simiii (MT+)	448.65	+
A. vanbreuseghemii	428.63	+
T. mentagrophytes complex		
T. asteroides	424.63	+
T. erinacei	344.79	+
T. erinacei	511.73	+
T. erinacei	677.86	+
T. mentagrophytes	110.65	+
T. rubrum complex		
T. fluviomuniense	592.68	+
T. kuryangei	422.67	–
T. kuryangei	518.63	+
T. megninii	389.58	+
T. rubrum	302.60	+
T. rubrum	392.58	–
T. raubitschekii	202.88	–
T. raubitschekii	287.86	+
T. raubitschekii	100084	+
T. raubitschekii	102856	+

MT, Mating type; +, growth; –, no growth.

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