Mr. Keith Crittenden
United Dental Resources
P.O. Box 333
Crete, IL 60417

February 27, 2008

Dear Keith,

This report is for DNA analytical work performed on the 2 samples delivered by DHL to our laboratory at 1556 14 February. The analyses will be charged to the credit card number provided.

We will mail you this report and complete results.

Original samples and all subcultures and extracts associated with this report will be retained for 9 days after today's date. To make arrangements to archive samples and subcultures longer than 9 days, please call.

As always I encourage you to call me at (866) 709-6600, ext. 26 with any questions you may have.

As part of our dedication to continuous improvement, we encourage you to share any suggestions or feedback you might have that would enable us to serve you better. Please send your suggestions to susan@microcheck.com or call Susan Sinclair at 866-709-6600, ext. 23.

Thank you for this opportunity to work with you.

Sincerely,

Carrie D. Pontbriand
Laboratory Manager

CDP/cdp

LINE NO.	SAMPLE ID LABEL	MICROORGANISM IDENTIFICATION	MATCH %	TYPE	CONFIRM TEST	LAB COMMENTS
1	ND-1 BL colony 1	*Paenibacillus macerans* **Paenibacillus* species	95.5 99	B		A GenBank search was done to provide additional information pertaining to this identification. The result of that search listed a general species of this genus as the best match. Based on the combination of these two results this identification is to the genus.
2	ND-3 KU colony 2	*Kocuria rhizophila* *Rothia mucilaginosa* **Rothia amarae*	95.49 93.15 100	B		See Lab Notes at the end of the Results Table.
3	ND-3 KU colony 3	*Arthrobacter woluwensis* *Micrococcus luteus* **Micrococcus* species	95.61 95.45 100	B		See Lab Notes at the end of the Results Table.

Lab Notes:

LINE NO. 2: A GenBank search was done to provide additional information pertaining to this identification. The result of that search listed *Rothia amarae* as the best match. This species is not listed in our validated database. *Rothia mucilaginosa* was listed as the seventh choice by our validated database. Based on the combination of these results this identification is to the genus *Rothia.*

LINE NO. 3: A GenBank search was done to provide additional information pertaining to this identification. The result of that search listed *Micrococcus* species as the best match. *Micrococcus luteus* was listed as a third choice by our validated database. Based on the combination of these results this identification is to the genus *Micrococcus.*

Source information for the recovered organisms is listed below. The sources of the bacterial organisms were compiled from the Bergey Manuals (Holt, J.G. and N.R. Kreig. 1984. Bergey's Manual of Systematic Bacteriology. Williams and Wilkins, Baltimore. Volume 1, pages 1-964, Holt, J.G, P.H. Sneath, N.S. Mair, and M.E. Sharpe. 1986. Bergey's Manual of Systematic Bacteriology. Williams and Wilkins, Baltimore. Volume 2, pages 965-1600, and N.R. Kreig. 1994. Bergey's Manual of Determinative Bacteriology. Williams and Wilkins, Baltimore. 787 pages), unless otherwise noted.

Paenibacillus species – This organism was formerly known as *Bacillus* species. The primary habitat of the majority of *Bacillus* species is soil. From soil, aerobic spore formers can contaminate everything by dust or other means. They may play an important role in such secondary habitats in degrading polymers or other chemical compounds. As a result, *Bacillus* species are especially important as food spoilage organisms.

Rothia species – This organism is a normal inhabitant of the human oral cavity. It is present in saliva and is isolated most frequently from supragingival dental plaque. According to the International Journal of Systematic and Evolutionary Microbiology (2002), 52, 2257-2260 published online, *Rothia amarae* was named as a species that was capable of deodorizing dung and sewage and was isolated from a sludge sample taken from a foul water sewer.

Micrococcus species – The primary natural habitat is mammalian skin. The secondary habitat is meat and dairy products, soil and water. *Micrococcus* is nonpathogenic however some strains may be opportunistic pathogens.

Key to Symbols and Abbreviations in the Microcheck Results Table

DNA ANALYSIS Automated 16S and LSU D2 gene sequencing for identification of aerobic and anaerobic bacteria, actinomycetes, yeast, and fungi.

***** An asterisk next to an organism name indicates a GenBank search result

TYPE Microorganism TYPE

AC	actinomycete	**FAN**	facultative anaerobe
AN	anaerobic bacterium	**M**	mycobacterium
B	aerobic bacterium	**TH**	thermophilic bacterium
F	fungus	**Y**	yeast

( ) Parentheses ( ) around an entry in the TYPE column indicate that the isolate was a different type than what the organism was submitted as by the client.

CONFIRM TEST CONFIRMATION TESTING is done on an isolate to confirm submission type or as requested by the client.

CONFIRM TEST RESULTS	**GPR**	Gram positive rods	**GPC**	Gram positive cocci
	GNR	Gram negative rods	**GNC**	Gram negative cocci
	GVR	Gram variable rods		
	coag$^+$	coagulase positive	**coag$^-$**	coagulase negative
	ox$^+$	oxidase positive	**ox$^-$**	oxidase negative
	aryl$^+$	arylsulfatase positive	**aryl$^-$**	arylsulfatase negative
	API 20E	Metabolic characterization that is done for members of the Family Enterobacteriaceae.		

We encourage you to call one of our DNA Analysts with any questions you may have:
Samantha Calderon – 866/709-6600 @ ext.61
Carrie Pontbriand – 866/709-6600 @ ext. 26