شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومـــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قَسَـــم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

STUDY OF EAR WAX

Essay

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Submitted
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Enas Mohamed Roshdy Mohamed

List of Abbreviations

C T S	Cotton Tipped Swabs
DSJ	Deep – Superficial Junction
E A C	External Auditory Canal
E A M	External Auditory Meatus
H B V	Hepatitis B Virus
K A D S	Keratinocyte Attachment Destroyig Substance
P C R	Polymerase Chain Reaction
S C I	Spinal Cord Injuries
T M	Tympanic Membrane

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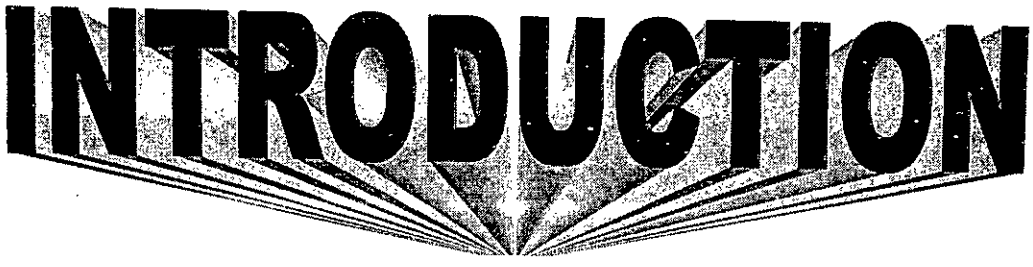
INTRODUCTION

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The skin of the cartilaginous part of the external auditory canal has numerous sebaceous and ceruminous glands, ceruminous glands are modified apocrine sweat glands,there are aproximately 1000 to 2000 ceruminous glands in a normally developed external auditory canal. ***(Campos et al 1998)***

Earwax is formed from wax glands in the external ear canal as well as other components such as dead skin, sweat and oil. The primary component of earwax is keratin which is derived from dead skin. Earwax thus differs slightly from cerumen which is the secretory product of the ceruminous glands in the external auditory canal. ***(Robinson et al, 1990)***

Cerumen is a word which is often used incorrectly as a synonym for ear wax (amixture of keratinocytes ,hairs, dirt,and cerumen). Cerumen actually refers to the secretion product of the ceruminous glands. ***(Brian and Michael , 1990)***

The origin of the word cerumen is considered in many

dictionaries to be from the latin (Cera) meaning wax. This is probably incorrect since the Roman term in latin for a collection of material in the external ear was (Sordes Aurium).The derivation of cerumen is more likely to have arisen from the (Greek Keros),meaning wax ,and keroumenos meaning formed of wax.Alternatively there may have been either a mistranslation of the latin (Cera Aurium) or synthesis of the word cerumen by an arabic translater of latin . ***(Robinson et al, 1990)***

The first discription of the ceruminous glands is credited to the Danish anatomist (Steno) (1638-1686).The translation from latin of his work is frequently refrenced as "The First Discription Of Cerumen Producing Glands". ***(Brian and Michael , 1990)***

There are two types of ear wax wet and dry both phynotypes are determined by a pair of genes where the wet allele (W) is dominant over the dry allele(w),a mandelian inheritance that follows an autosomal pattern. ***(Campos et al 1998)***

Dry wax is common in Asia, while wet wax is common in

Western Europe. Dry wax also known as "Rice-Bran wax", contains by weight about 20% lipid. Oddly enough Rice-Bran wax is associated with a lower incidence of breast cancer. ***(Robinson et al, 1990)***

The principle components of ear wax are lipids and protiens, it contains other elements in smaller quantities, glucopeptides (galactose,glucose,fucose). Monosaccharides (fructose),and minerals (sodium, potassium, calcium, magnesium, phosphorus and copper). ***(Brotz et al, 1990)***

The composition of earwax has assessed by several techniques such as gaschromatography and mass spectrometry. Long chain fatty acids, alcohols, cholesterol precursors, squalene, and other long chain hydrocarbons have been identified. A technique combining gas chromatography and mass spectrometry revealed saturated and unsaturated long-chain fatty acids, alcohols, squalene and cholesterol. The amino acid composition of earwax with hair and epidermal cells included has also been assessed, but not quantitated. ***(Craig et al, 2001)***