

Tables

Table 1 FTIR-ATR spectrum and vibrational analysis of biomolecules present in the human scalp Hair tissue

Wavenumber (cm ⁻¹)	Band Assignment
3264	N-H stretching mode (Amide A) of Protein
3072	Amide –B band due to overtone of Amide I band
2962	Asymmetric stretching vibrations of CH ₃ of proteins and Lipids
2880	Asymmetric stretching vibrations of CH ₂ methylene group of fatty acids
2864	CH ₃ symmetric stretching of methane groups of proteins and Lipids
1633	C=O symmetric stretching vibrations of amide group Amide I
1516	Amide II band due to N-H bending vibration strongly coupled C-N stretching of Proteins
1454	δ C-H/CH ₂ /CH ₃ of both lipid and protein groups (LDL), Squalene
1245	Asymmetric P=O stretching vibrations of PO ₂ stretching of Lipid Phosphate
1068	C-O stretching vibrations of glucose region

Table 2 Intensity ratio parameters of Healthy and Acne Vulgaris tissues

Samples	Protein / Lipid		Amide I / Lipid		Amide II / Lipid		Squalene / Lipid	
	I ₃₂₆₄ / 2864		I ₁₆₃₃ / 2864		I ₁₅₁₆ / 2864		I ₁₄₅₄ / 2864	
	Healthy	Acne Vulgaris	Healthy	Acne Vulgaris	Healthy	Acne Vulgaris	Healthy	Acne Vulgaris
1	1.9606	2.8254	3.5906	7.2222	3.3307	6.6508	2.1969	4.3968
2	1.7778	1.9606	2.963	3.6535	2.7099	3.3386	1.016	2.1732
3	1.6233	2.9211	2.214	6.9605	2.0605	6.3158	1.4186	4.3026
4	2.0000	2.0758	4.5606	4.2424	4.1364	3.7273	2.8485	2.6136
5	1.7241	2.2661	3.1724	5.2110	2.8793	4.6881	1.9052	3.3028
6	1.7711	2.2427	2.811	5.3786	2.607	4.8155	1.7662	3.2816
7	1.6933	1.7591	2.6626	3.4234	2.4601	3.0949	1.6503	2.1825
8	1.8571	2.0918	3.0357	5.2449	2.6929	4.7347	1.7786	3.2347
9	1.5848	1.8293	2.2712	3.0732	1.9915	2.6768	1.3051	1.8293
10	1.6418	1.7349	2.8806	2.9628	2.6119	2.7372	1.8060	1.7930
11	1.5773	1.7667	2.493	2.9528	2.2448	2.7444	1.6399	1.7922
12	1.7750	1.8122	2.975	2.9771	2.7875	2.7863	1.9000	1.9542
13	1.3119	2.1529	2.1835	3.9529	2.0367	3.6000	1.5688	2.4118
14	1.6310	1.7725	2.506	2.5059	2.2798	2.2797	1.5536	1.5536
15	1.6418	1.7035	2.8806	3.6627	2.6119	2.7209	1.806	2.5930
16	1.6340	1.6901	3.0825	3.7777	2.8041	3.4327	1.8763	2.6783
17	1.7238	2.0000	3.1429	4.1066	2.8952	3.8361	1.9429	2.5000
18	1.6995	2.0544	2.8653	3.9116	2.5959	3.4966	1.7668	3.2176
19	1.7407	2.4944	2.9722	5.4607	2.7315	5.0899	1.7963	3.3371
20	1.5734	1.7666	2.493	3.6527	2.2448	3.4444	1.6399	2.7222

Table 3 Group Statistics T-Test of Hair tissues of Healthy and Acne Vulgaris tissues

	Group	N	Mean	Std. Deviation	Std. Error Mean
Protein / Lipid	Acne Vulgaris	20	2.0460	0.3584	0.0801
	Healthy	20	1.6971	0.1485	0.0332
Amide I / Lipid	Acne Vulgaris	20	4.2167	1.3056	0.2919
	Healthy	20	2.8878	0.5313	0.1188
Amide II / Lipid	Acne Vulgaris	20	3.8105	1.2124	0.2711
	Healthy	20	2.6356	0.4868	0.1089
Squalene / Lipid	Acne Vulgaris	20	2.6935	0.7971	0.1782
	Healthy	20	1.7591	0.3603	0.0806

Table 4 Independent Samples t-Test of Healthy and Acne Vulgaris Hair tissues

Internal Ratio Parameter (IRP)	Levene's Test for Equality of Variances			t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
R1 =Protein / Lipid	Equal variances assumed	8.893	0.005	4.022	38.00	0.000	0.3488	0.0867	0.1732	0.5244
	Equal variances not assumed			4.022	25.33	0.000	0.3488	0.0867	0.1703	0.5274
R2 =Amide I/ Lipid	Equal variances assumed	10.637	0.002	4.684	38.00	0.000	1.4148	0.3021	0.8032	2.0263
	Equal variances not assumed			4.684	25.72	0.000	1.4148	0.3021	0.7935	2.0360
R3 =Amide II/ Lipid	Equal variances assumed	10.518	0.002	4.463	38.00	0.000	1.2532	0.2808	0.6847	1.8217
	Equal variances not assumed			4.463	25.51	0.000	1.2532	0.2808	0.6755	1.8310
R4= Squalene/ Lipid	Equal variances assumed	9.204	0.004	5.288	38.00	0.000	0.9856	0.1863	0.6083	1.3629
	Equal variances not assumed			5.288	27.29	0.000	0.9856	0.1864	0.6033	1.3678