سُورَةُ النَّحۡلِ

ترتيبها ١٦ — آياتها ١٢٨

بِسۡمِ ٱللَّهِ ٱلرَّحۡمَٰنِ ٱلرَّحِيمِ

وَأَوۡحَىٰ رَبُّكَ إِلَى ٱلنَّحۡلِ
أَنِ ٱتَّخِذِي مِنَ ٱلۡجِبَالِ بُيُوتٗا وَمِنَ ٱلشَّجَرِ وَمِمَّا يَعۡرِشُونَ ﴿٦٨﴾ ثُمَّ كُلِي
مِن كُلِّ ٱلثَّمَرَٰتِ فَٱسۡلُكِي سُبُلَ رَبِّكِ ذُلُلٗاۚ يَخۡرُجُ مِنۢ بُطُونِهَا
شَرَابٞ مُّخۡتَلِفٌ أَلۡوَٰنُهُۥ فِيهِ شِفَآءٞ لِّلنَّاسِۗ إِنَّ فِي ذَٰلِكَ لَأٓيَةٗ لِّقَوۡمٖ
يَتَفَكَّرُونَ ﴿٦٩﴾

Quality Assessment of Some Egyptian and Saudi Arabia Honeys

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The 1st Continental Symposium on Honey Production, Bee Health and Pollination Services in Africa

•**Theme: The Future of the African Bee, 6-8 September 2015, Cairo, Egypt**

INTRODUCTION

- Determination of the standard criteria of food products is the most important process.
- Purity and contaminant- free food are other factors of great concern for consumer health.
- Honey types differ from one country to another and in different regions in the same country due to floral origin.
- Reason for testing honey for quality control purposes is to verify the authenticity of the product.

- Reveal the possible presence of artificial components or adulterants.
- Honey composition is tightly associated to its
- botanical origin, geographical area.
- Products from one region may attain a surplus value than similar products from another area.
- In Egypt and Saudi Arabia, beekeeping is practiced in many areas, characterized by a remarkable richness of honey plants.
- comparing these honeys with **quality standards** is greatly required.

The main goal of this work was to **characterize** Cotton honey from the honeybee Carniolan hybrid collected from Sharkia governorate, Egypt, (5$)

Acacia honey produced in south region of Saudi Arabia, from local colonies, *Apis mellifera jemenitica*. (100$)

MATERIALS AND METHODS

- Investigation was carried out at

Food Safety& Quality Control Lab, Faculty of Agriculture, Cairo University, Egypt during 2012.

- To study physio-chemical properties of cotton and acacia (Salam) honeys.
- Three cotton and acacia (Salam) honey combs represented three different local colonies were collected.

Collecting honey samples

Acacia ehenbergiana

Gossypium barbadence

RESULTS AND DISSCUSSION

Table (1). Mean values of some Physical characteristics of cotton and salam honeys analysis

Physical characters	Water content g/100g (%)	PH	Viscosity cps	Total acidity meq/Kg	Free Acidity meq/Kg	HMF mg/kg	Nitrogen %	Total amino acids g/100g	Proline mg/kg	Total minerals %
Cotton	22.2	3.81	16250	38.50	35.00	11.65	0.095	1.50	457.0	0.80
Salam	17.2	3.79	18000	42.00	38.00	246	0.16	3.57	1024	0.36

Table (2). Minerals composition of cotton and salam honeys (ppm).

Minerals	K	Ca	Na	Mg	Zn	Mn	Fe	Cu	Co	Ni
Cotton	2018.0	287.0	153.0	327.0	5.7	3.3	22.4	1.49	0.0	0.0
Salam	438.0	625.0	625.0	13.0	4.0	2.0	0.0	0.0	0.0	0.0

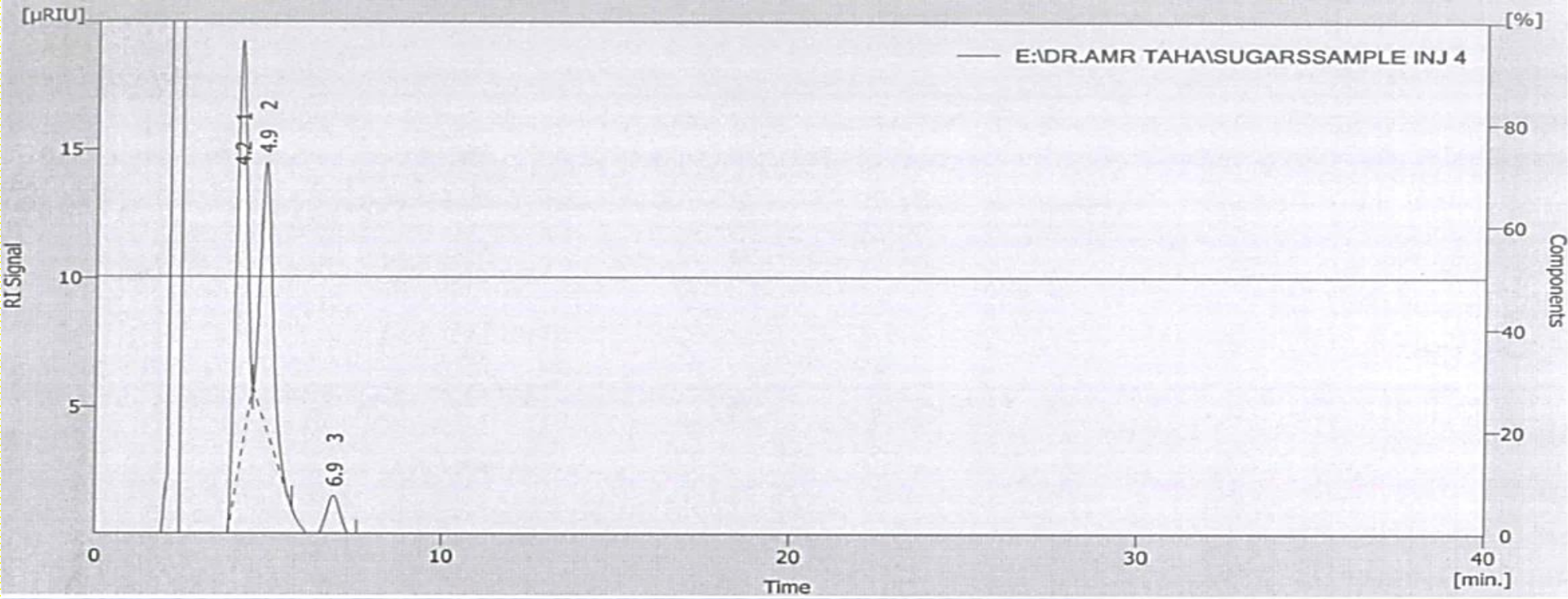
Table (3). Values of some enzymes characteristics of cotton and salam honeys

Enzymes	Invertase u/kg	Diastase u/g	Glucose oxidase u/g
Cotton	74.86	16.9	0.17
Salam	4.60	6.50	0.07

Table (4). Mean values of some Sugars characteristics in cotton and salam honeys

N/A= non detected

Sugar	Glucose %	Fructose %	Sucrose %	Maltose %
Cotton	42.66	37.43	3.0	1.92
Salam	34.3	37.7	7.3	N/A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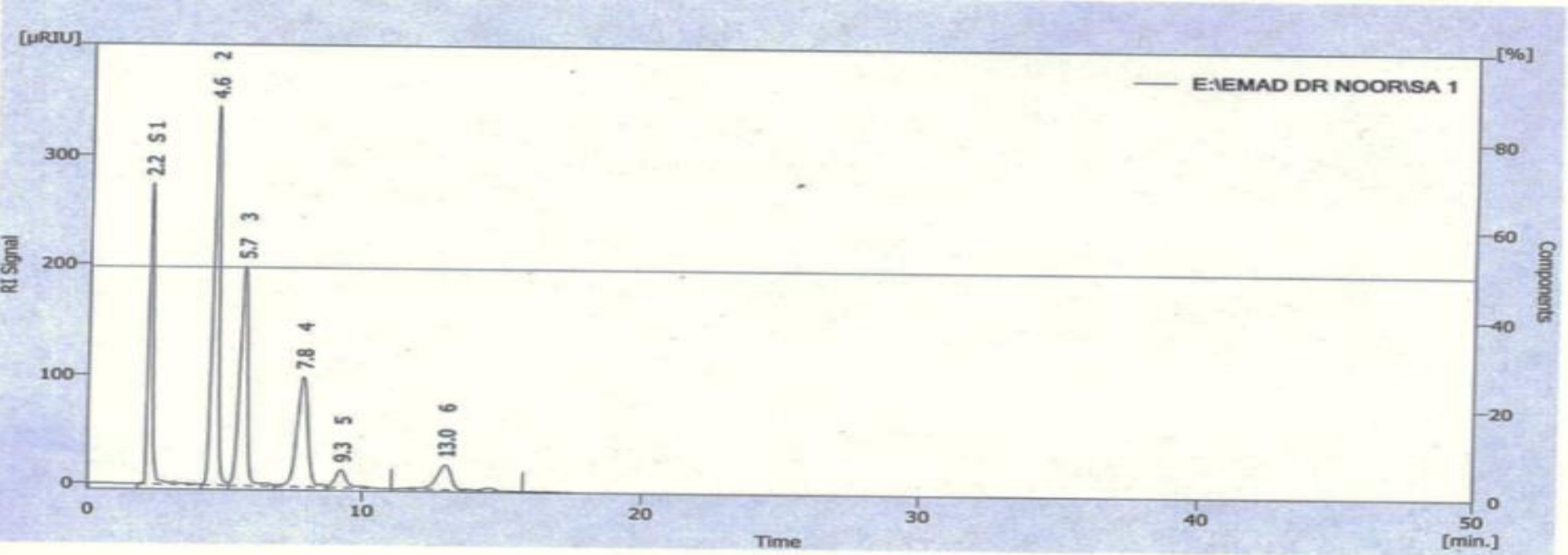
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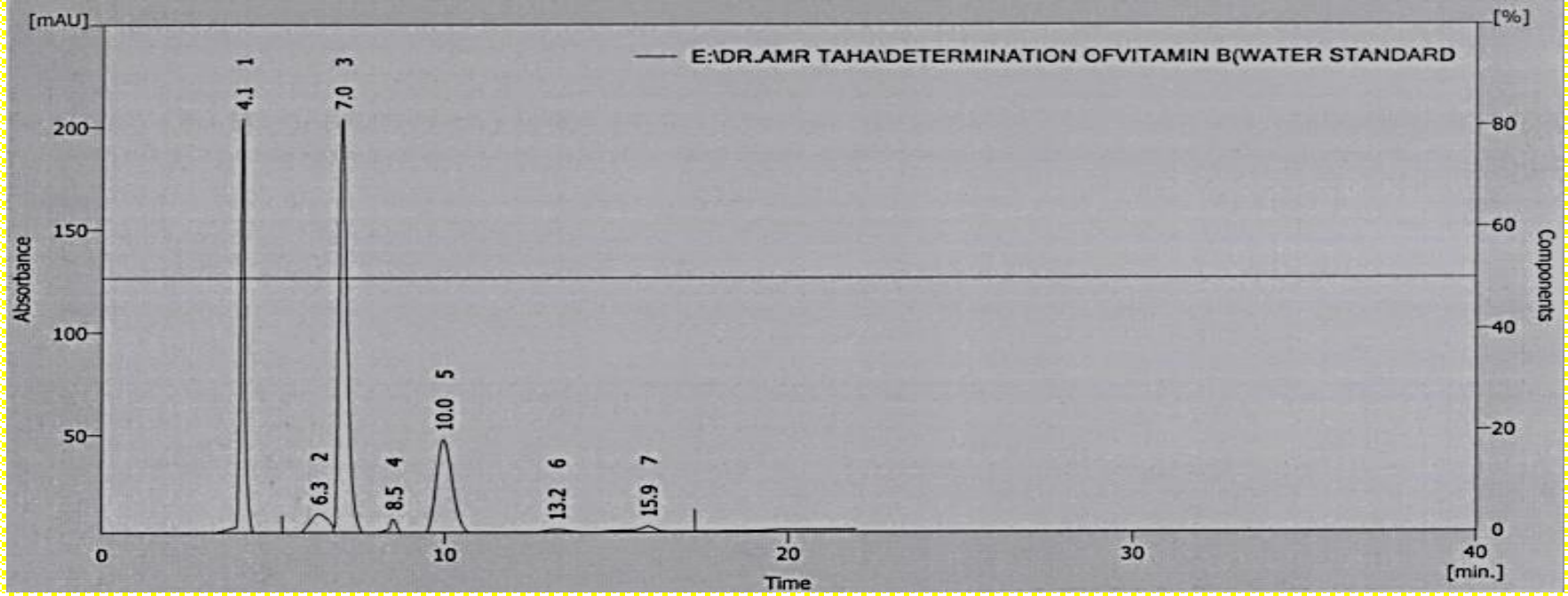
Table (5). Values of some vitamins characteristics (mg/100g) of cotton and salam honeys.

Vitamins	B1	B3	B5	B6	B9	B12	B13
Cotton	N/A	N/A	0.055	0.031	0.002	0.001	0.0015
Salam	0.02	0.600	0.20	0.017	0.10	N/A	0.001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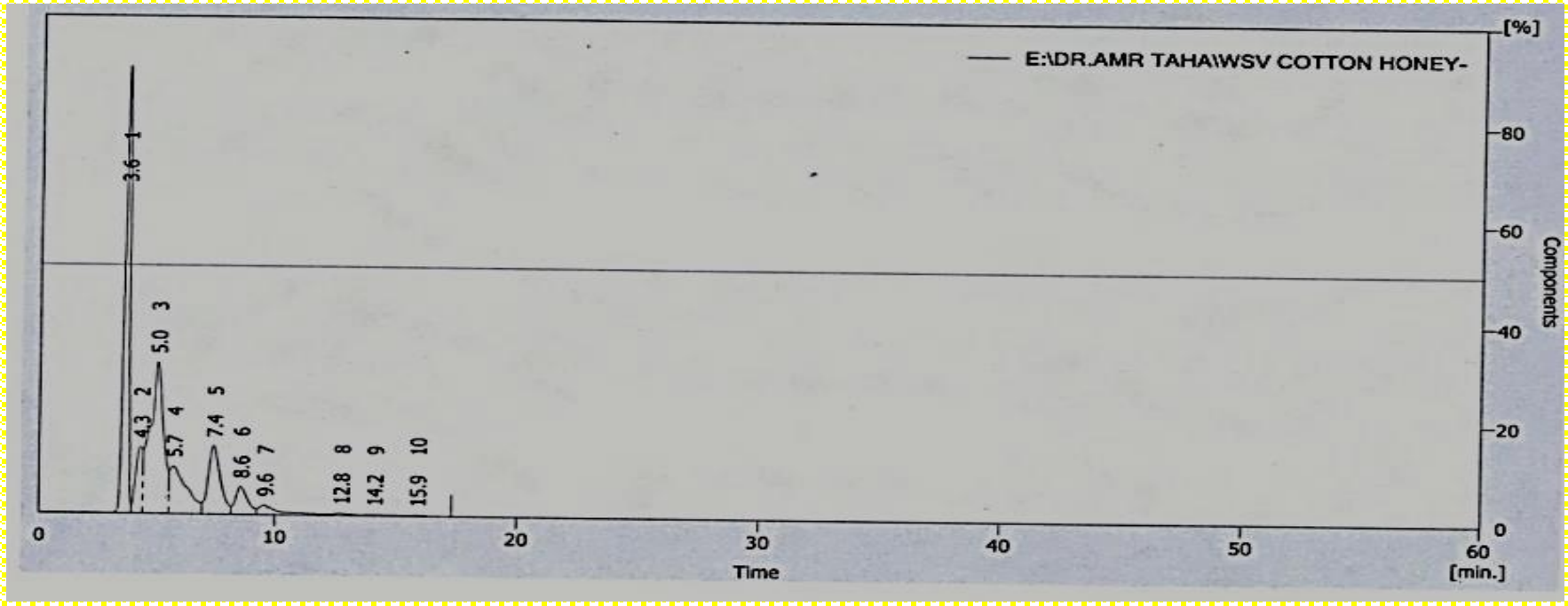
13.2 6
15.9 7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7.4 5
8.6 6
9.6 7
12.8 8
14.2 9
15.9 10

CONCLUSION

- Salam Saudi Arabia honey was higher viscosity than cotton Egyptian honey.
- Both of them were acidity, pH range (3.81-3.79).
- HMF was very high in salam honey (264 mg/kg). Exceed the standard.
- Vitamins B1 and B3 did not detected in cotton honey. (As indicator).
- Vitamin B12 did not detect in salam honey.

- Protein content and proline amino acids (1024 mg/kg) was in high value in salam honey than cotton honey (457 mg/kg). ?
- Invertase enzyme was high in cotton honey than salam honey. ?
- Maltose sugar did not detected in salam honey (as indicator).
- Minerals, k, Ca, Na, Mg were superior of all tested minerals. Minerals was more in cotton.


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