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جامعة عين شمس

التوثيق الالكتروني والميكروفيلم



نقسم بللله 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 %



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A study of the Anticarcinogenic Effect of certain Flavonoidal Constituents of Some Local Egyptian Foods Against Dietary Carcinogens

Thesis

submitted to the High Institute of Public Health in partial fulfillment of the requirements for the Degree of Master of Public Health Sciences

(Nutrition)

Вy

Soad Mohamed Ahmed Gabara

B. Sc. Faculty of Science - Alexandria University - 1977

D.P.H. Nutrition - High Institute of Public Health - Alexandria University. 1985

D.P.H. Food Analysis - High Institute of Public Health - Alexandria University. 1995

High Institute of Public Health Alexandria University 2001

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Chapter 1

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List of Abbreviations

PAHs : Polycyclic hydrocarbons

HAs : Heterocyclic amines

 AFB_1 : Aflatoxin B_1

Vit. A : Retinoids

Vit. E : Tocopherols

UV : Ultra violet

PC : Paper chromatography

R_f : Relative position on P.C.

Q : Quercetin

K : Kaempferol

M : Myricetin

Qmg : Quercetin monoglucoside

Qdg : Quercetin diglucoside

μ**gm** : Microgram

mg/L : Milligram per litre

TAA : Total antioxidant activity

BHT : Propyl galate

TBHQ : t-butyl hydroquinone (BHA)

S.C. : Subcutaneous

LD₅₀ : Lethal dose

I.V. : Intravenous

ppm ; Part per million

I.C. : Inhibition concentration

y-irradiation

Gamma rays

IQ

: 2-amino-3-methyl imidazo[4,5-f]quinoline

n.mol/ml

: Nano mole per mellilitre

HCAs

: Heterocyclic aromatic amines

MelQ

: 2-amino-3,8-dimethyl imidazo[4,5-f]quinoxaline

PhIP

: 2-amino-1-methyl 1-6-phenylimidazo[4,5-b] pyridine

Glu-p-1

: 2 amino -6-methlyldipyrido[1,2-a:3 DUD, 2' -

d]imidazole

Glu-p-2

: 2-aminodipyido [1,2-a:3 [10]], 2`-d] imidazole

MeIQ

: 2-amino-3,4-dimethyl imidazo[4,5-f]quinoline

 Trp_1

: 3-amino-1,4-dimethyl-5H-pyrido[3,4-b]indole

Trp₂

: 3-amino-1-methyl-5H-pyrido[3,4-b]indole

P450s

Set of cytochrome enzymes which have maximum

spectra at 450 n.m.

CYP₃A₄,

 CYP_2C_9 ,

:Isoforms of cytochrome enzyme

 CYP_1A_2

: 1-o-hexyl-2,3,5-trimethyl hydroquinone

IUPAC

HTHQ

: Systemic name of compounds

E.A.

: Ethyl acetate

HCl

Hydrochloric acid

INTRODUCTION

Diet plays an important role in cancer development, both by increasing or reducing the risk of cancer. During the cooking of meats, several highly mutagenic heterocyclic amines are produced. On the other hand, epidemiological studies showed that the consumption of vegetables and fruits were negatively correlated with the incidence of human cancer in stomach, colon, breast, prostate and even lung and bladder. These exciting epidemiological discoveries have encouraged scientists to determine whether specific vegetable components are responsible for the observed associations. Flavonoids occur naturally in plant foods and are a common component of our diet. They occur in food as O-glycosides, and the estimated human oral daily consumption is about 0.02 gm/kgm/day^(1,2).

Adequate data on the occurrence of flavonoids in local Egyptian food are lacking. Food derived flavonoids such as flavonols (Quercetin, Kaempferol, Myricetin) and flavones (Apigenin and Luteolin), were purified chromatographically and their suppressing activity with *Salmonella typhimurium*. TA 98 has been reported⁽²⁾.