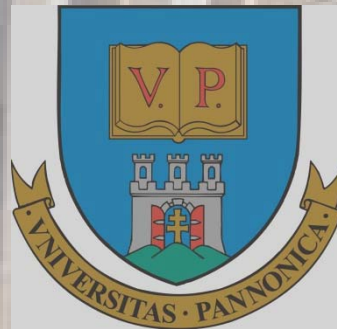


Radionuclides in the service of love

***INTERNATIONAL INTERCOMPARISON EXERCISE ON NATURAL
RADIATION MEASUREMENTS UNDER FIELD CONDITIONS***

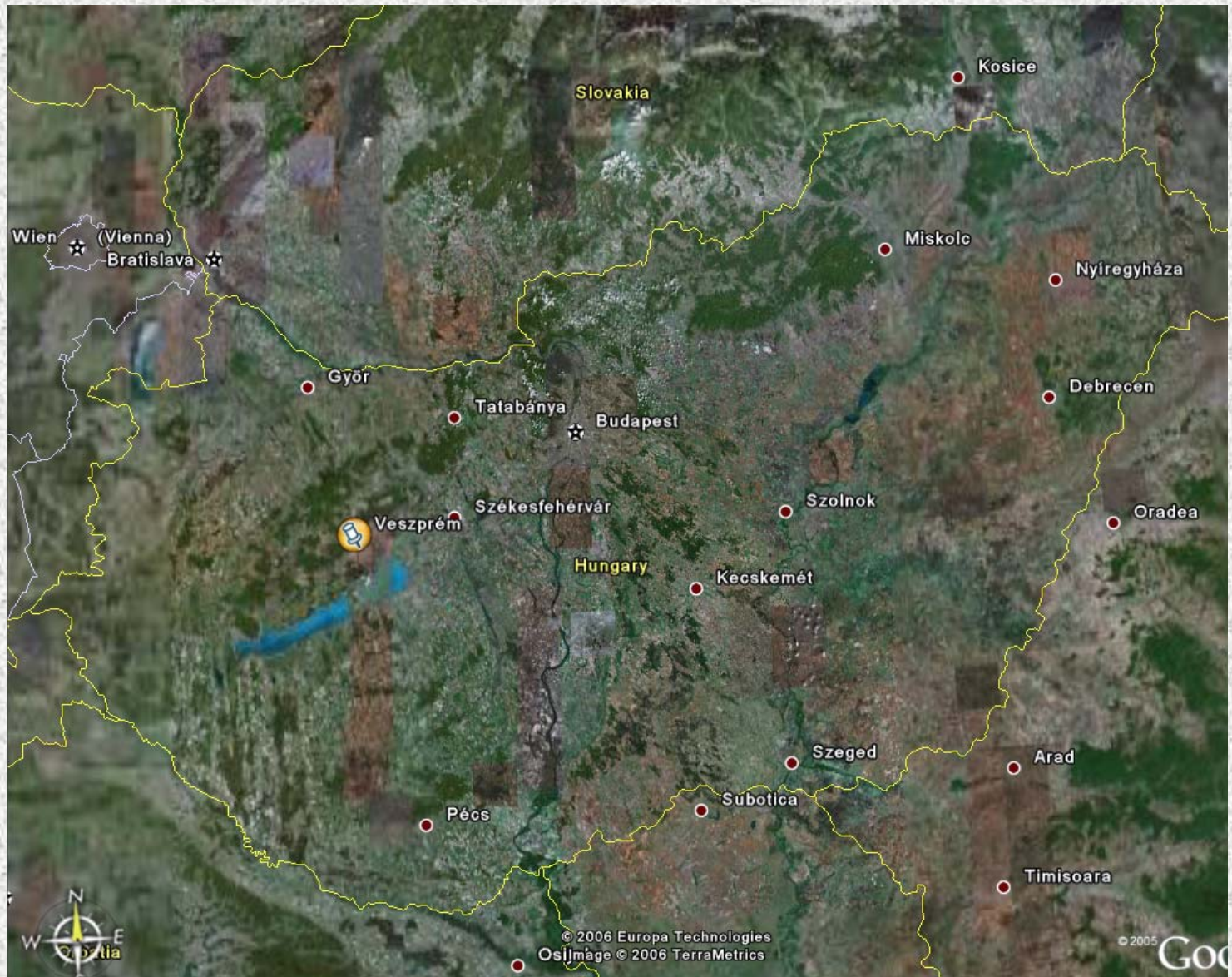
May, 23-27, 2011



Tibor Kovács, János Somlai

**University of Pannonia
Veszprem
Hungary**

Location of Veszprém



Radon-Thoron measurement in different dwellings

Third survey

Collaboration with: ELTE University, Babha Institute India, NIRS Japan

Sites: (more than 200 houses)

- Veszprém county 50 houses
- Pest County
- Bács-Kiskun County
- Békés County

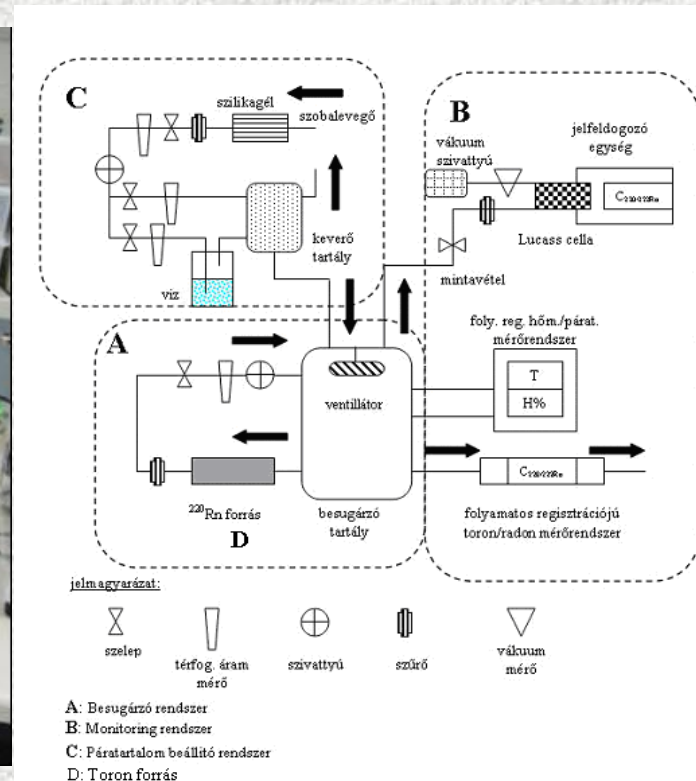
devices:

- SSNTD set (mostly Cr-39)
- CD/DVD based retrospective
- Rad7, Pylon WLx, alphaguard



Thoron development in the Institute

Calibration chamber: Based on NIRS thoron chamber



No aerosol generator

Shinji Tokonami is involved in the Fukushima Project

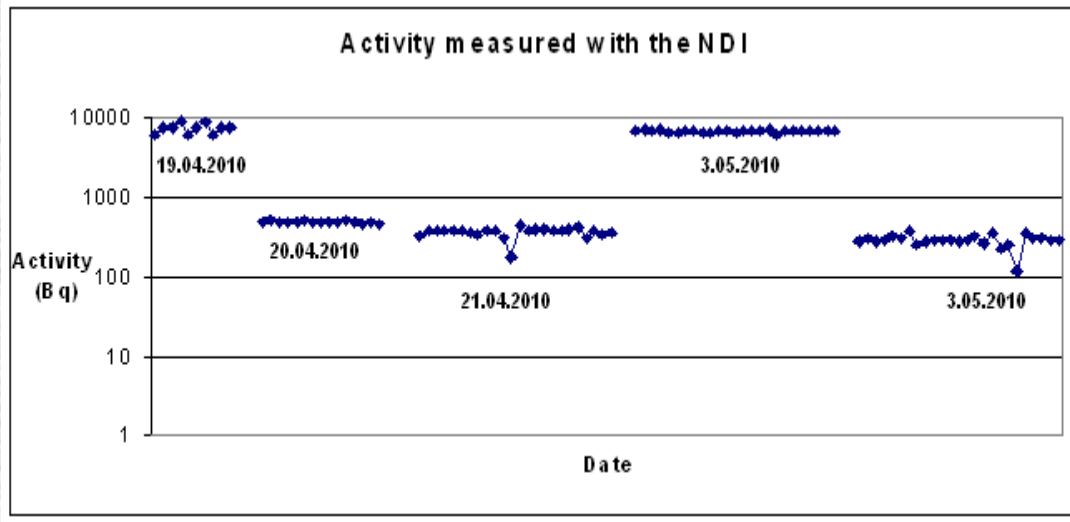


Lantern mantle was not applicable in our case



Radon-Thoron development in the Institute

Preparation of radon free thoron ceramic source



- Volume = 235.5 cm³
- Activity = 56.2 kBq

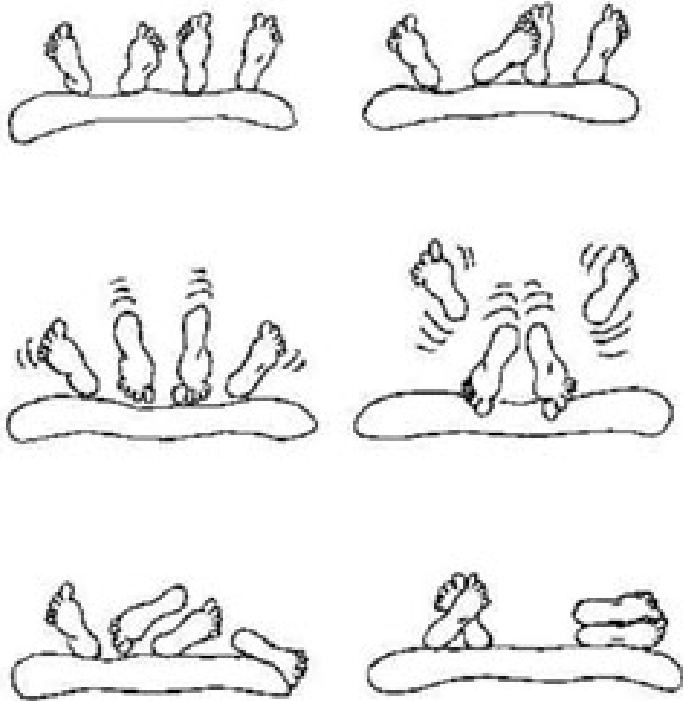


V. Jobbagy, B. Burchelle Solid thoron source preparation in a porous mineral matrix
Radiation Protection Dosimetry 2010, 141, 440-443.

We have no more budget to improve the chamber

Recommendation : „Make love not war” (not measurement)”

Radiation Dose

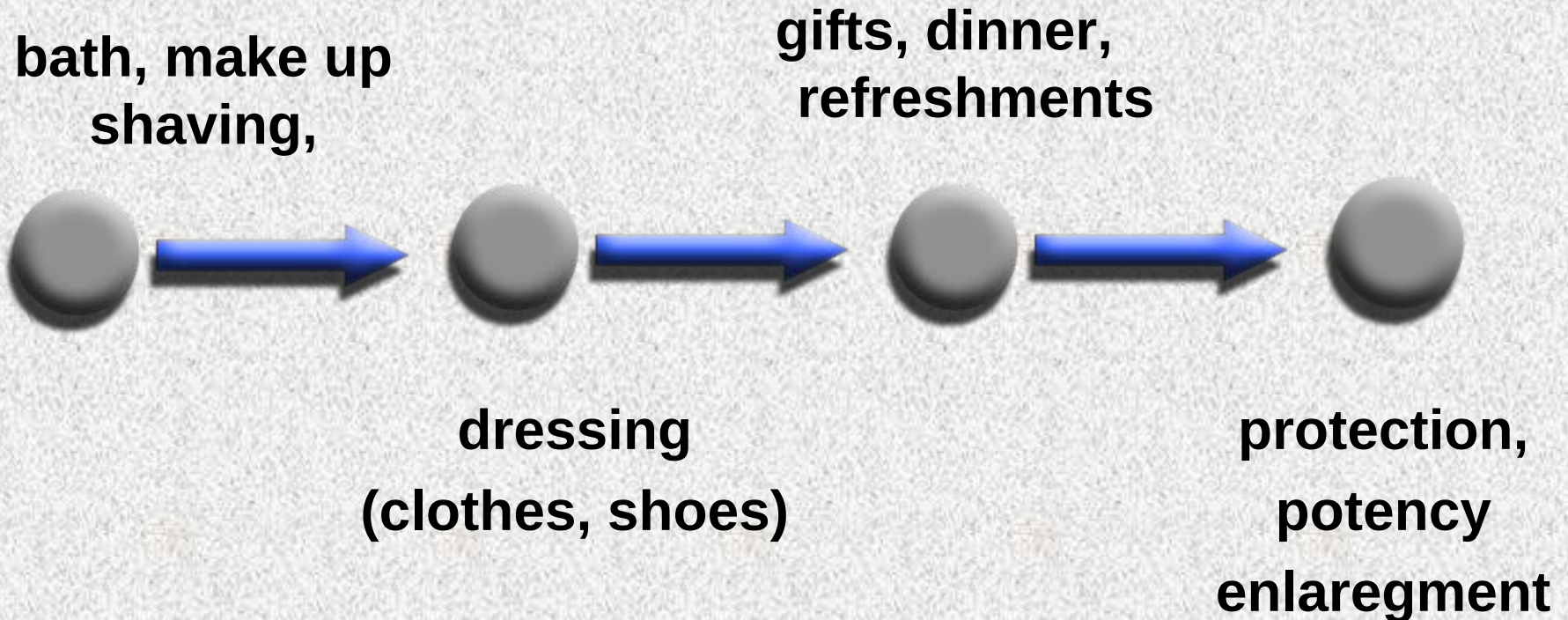


>

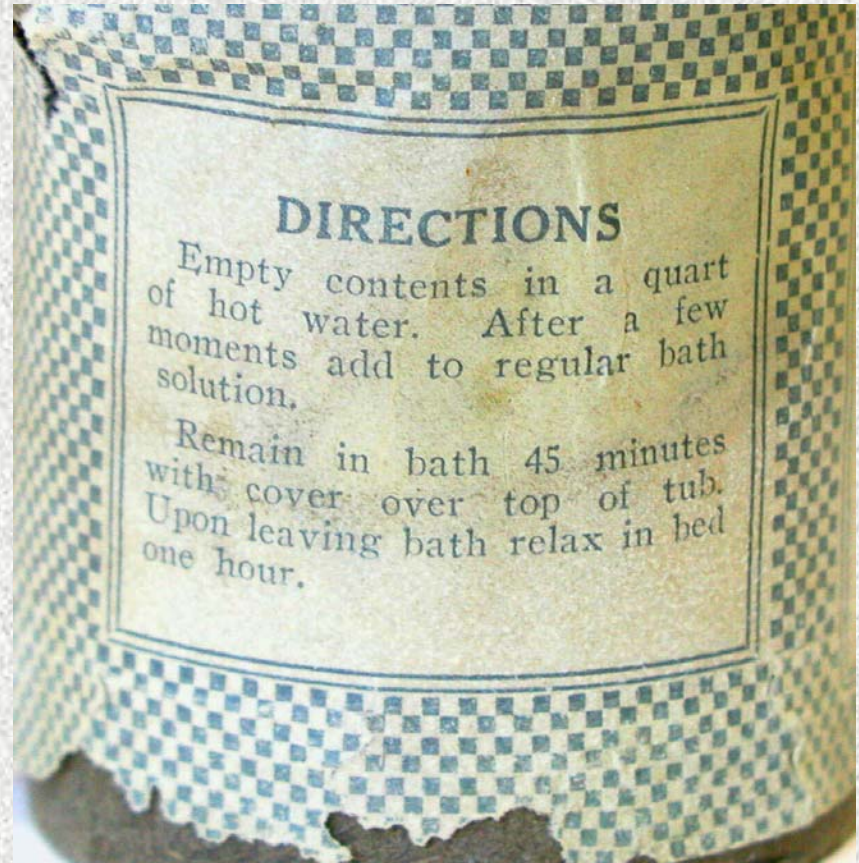


Materials and methods

**How we can use our „active knowledge”to
increase our chance to increase our
(sexual) activity?**



Radium Emanation Bath (ca. 1925)



In the case of nervous system disorder, insomnia,
general weakness, arthritis , rheumathism
1946 „Epsom Salt” Radium Chloride (28 kBq)

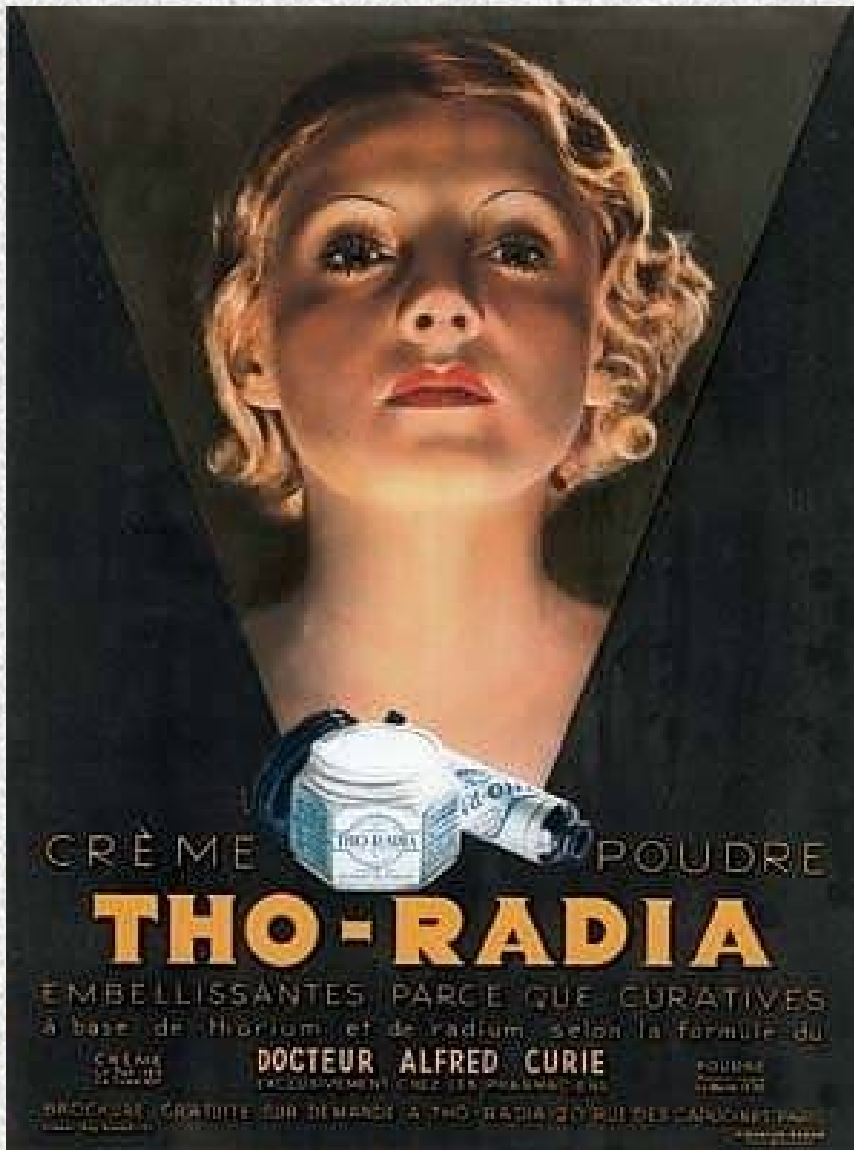
Cosmetics





- Face cream

Tho-Radia Face Cream -1930



100 g creame / canister :

0.5 g Thorium-chloride

+

Ra-226:

- 0.25 mg Radium - bromide.
- 5.42 MBq / canister

Radioactive content of Tho-Radia Face Cream

	^{226}Ra		^{232}Th	
	Criteria of radioactive material	In the canister	Criteria of radioactive material	In the canister
Activity concentration (Bq/g)	10	54 200	1	10,75
Gross activity (Bq)	10 000	5 420 000	1000	1075



- Face powder
- RaBr_2
- ThSO_4



- Lipstick
- Glows in the dark
- Girls could go to the date with a radiant face

Products of Tho-Radia Firm (1933 – 60's)

- Face cream
- Lipstic
- Soap
- Face tonic
- Thoot paste
- Hair-tonic



RADIUM v. GREY HAIR

*Who'd dream she
was 50?*

50—and not a grey hair
to be seen. Wonderful!
Yet an absolute fact.
Let 'CARADIUM' do
for you what it has
done for thousands
of our clients in all
parts of the world.
'CARADIUM' will
quickly restore, right
from the hair roots, the
natural colour, health and
beauty to your hair, making
you look 10 to 20 years younger.



*Write
for Free
Hair Book*

'Caradium' is NOT A DYE

CONTAINING RADIO-ACTIVE WATER.

Regular application of 'Caradium' will revivify the colour glands of the hair and cause the natural pigment to flow afresh. 'Caradium' Restorer is just as efficacious in cases of premature or inherited greyness or greyness caused by illness, worry or overwork. It is absolutely sure. So natural is the course of restoration that the use of 'Caradium' is absolutely undetectable.

Grey Hair will never appear if CARADIUM IS USED ONCE WEEKLY AS A TONIC
Olive Oil Shampoo Powders. *The finest in the world for producing
Soft and Glossy hair, 6d. each. Packets of twelve, 5/-*

WARNING.—Ask for Caradium Regd. and see that you get it; imitations are
useless.

Caradium

REGD. *Large
Size*

4/-

A 4/- size is now available for those only slightly grey.
'Caradium' Hair Restorer is obtainable at all good Chemists,
Harrods, Woolsons, Barkers, Selfridges, Licoch's, White's,
Boots, Taylor's Drug Stores, etc., or direct in plain wrapper,
POST FREE, U.K. (overseas 2/6 extra) from—

7/6

'CARADIUM' (REGD.), 38, Great Smith Street, Westminster, LONDON

- Another brand of hair tonic
- You looks like 10-20 years younger

Radium and Beauty

HERE are the first toilet preparations to embody Actual Radium, an astonishing new force for betterment, applied as an aid to Beauty. Learn how the amazing Energy of Radium has proved a boon to the human skin. Learn what Radium actually means to Beauty and how its power is employed in "Radior" Preparations. Study our \$5,000 guarantee. Then turn to "Radior" Toilet Requisites. When you have used, enjoyed and tested them you will adopt them as your own first aid to Beauty.

PREHISTORIC women first discovered her lungs in some quiet jungle pool. Ever since Beauty has engaged the world's attention.

Radium, though new to the world, is no less of absorbing interest. Its marvels have amazed and thrilled us all.

Who would have imagined that these two subjects would some day go hand in hand? Yet, in Radium, Science has discovered a revolutionary Beauty Secret.

Consult books on Radio-activity. Any number of them are in our public libraries. They will show you that Radium possesses an enormous power for human betterment.

The latest particle of Radium throws off a continuous stream of Energy Rays. An Energy never diminishing, never ceasing, day or night, year in, year out. A force a million times more powerful than any other known.

These Radium Rays are particularly valuable in effect upon the human skin. Dr. Louis Wickham and Dr. Dreyfus, specialists in the St. Lazare and the St. Louis Hospitals of Paris, have proved what Radium can do for even the most dreaded skin diseases.

Rays of Radium, in fact, energize and revitalize any living matter with which they come in contact. They are "accepted" by the human system as harmoniously as is sunlight by the plant.

This wonderful force for betterment has now been embodied in "Radior" Toilet Requisites, thus placing the power of Radium at the command of every woman who uses a face cream or powder, hair tonic or soap.

"Radior" Toilet Requisites are delightfully dainty and distinctive. They have an exquisite

and exclusive fragrance all their own, a perfume not for sale in any market. They are the first and only preparations for the toilet to contain Actual Radium—Nature's greatest aid to Beauty.

Every "Radior" Preparation is guaranteed, under \$5,000 penalty, to contain a definite amount of Actual Radium, and to retain its Radio-activity for at least twenty years. See Guarantee above.

In England, "Radior" Preparations are a source of several years' standing. They are used by noted women of title and fashion. They are the rage in the leading shops.

We present them to the United States as the greatest boon ever offered—to those who value perfection of complexion; rounded, youthful facial contour; a healthy skin and beautiful hair.

Each and every "Radior" Beauty Aid is the formula of a famous Parisian specialist. Entirely aside from Radium, you would choose "Radior" Preparations for themselves alone—for the silky smoothness of the cream—the palpable fineness of the powders and the tantalizing, haunting fragrance.

When to this perfection, as toilet preparations, is added the power of Actual Radium, the highest level of Beauty Culture is reached. From vanity—"Radior" Face Powder to beautiful "Radior" Skin Soap—from delightful "Radior" Face Powder to wonderful "Radior" Hair Tonic, "Radior" Toilet Requisites all contain actual Radium for Beauty's sake.

Space does not permit us to go into further details, but there are further facts concerning Radium and Beauty which every woman should know. They are contained in our booklet sent free on request.

Radior

Toilet Requisites

"Radior" Toilet Requisites are necessarily higher in price. This must be expected in preparations containing the finest ingredients only, plus a definite quantity of Actual Radium. But the greater benefits obtained from "Radior" Preparations would justify an even higher price. The best is always the cheapest and goes further.

It is easy to prove the superiority of "Radior" Preparations. Try them. See how smoothly the Vanishing Cream rubs in.

Notice how your complexion improves with "Radior" Peau de Vénus (night cream).

See how beautifully the face powder blends with the skin. How smoothly it adheres. Appreciate the soothing comfort of the Talc. Note the effects produced by the Hair Tonic.

Enjoy the strange, elusive fragrance. Then remember that each preparation has the power to work for betterment—the power of Actual Radium. It is easy to apply these tests.

Purchase "Radior" Toilet Requisites at any of the leading department and drug stores. If you are not delighted with them, communicate with us and we will see that your money is refunded.



Radior Articles

- 1 Peau de Vénus (Night Cream)..... \$2
- 2 Soap (Compound)..... \$1
- 3 Compact Powder..... \$1
- 4 Vanishing Cream..... \$2
- 5 Talcum Powder..... \$1
- 6 Hair Tonic..... \$2
- 7 Skin Soap..... \$1
- 8 Under Chin Pad..... \$10
- 9 Forehead Pad..... \$5
- 10 Face Powder..... \$2

See text, Black, Blue, Green, Red, Pink, Yellow, and Orange.

Write Today for This Vitrally Interesting Booklet



This is probably the most revolutionary booklet on the subject of Beauty ever published. You who have imagined that all had been done for Beauty which could be done should lose no time in availing yourself of this "new knowledge." Investigate the subject of "Radium and Beauty."

The booklet is reprinted from the book "Radium—Its Discovery and Power," by C. Asey, one hundred and twenty thousand copies of which have been distributed in England. It is years with our compliments. To secure your copy before our first edition is exhausted, mail the coupon NOW.

RADIIUM CO., LTD., of LONDON,
235 Fifth Ave., New York.

Gentlemen: Please mail me a copy of your booklet, "Radium and Beauty." I understand that this request places me under no obligation to you.

Name

Address

RADIIUM TOILET REQUISITES
OBTAINABLE AT

Leading Department Stores of
New York, Brooklyn and Newark
and
Liggett's Drug Stores

Radior

Reg. Trade Mark

Toilet Requisites

Sole Manufacturers

Radior Co., Ltd., of London

235 Fifth Avenue, New York

167 Oxford St., London, W. 1.

If your Dealer cannot supply you communicate with us.

ALCOGRAPHIC INC. N. Y.

Other advertisement of similar radioactive product

„Doramad” 1940 Tooth paste

154

MÉTHODE THO-RADIA

EMBELLISSANTE PARCE QUE CURATIVE

40

DENTIFRICE THO-RADIA

A BASE DE SELS DE THORIUM

FORMULE
du Docteur Alfred CURIE



Le grand tube :
6 francs

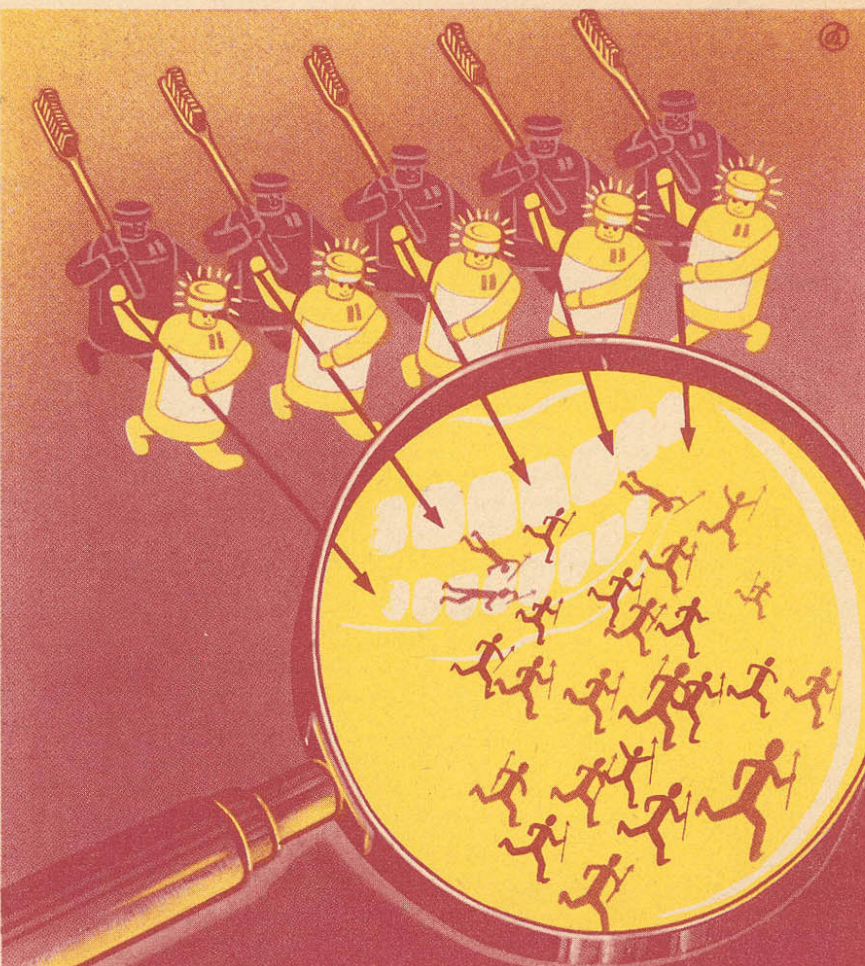
Astringent et bactéricide, il stérilise la cavité buccale, évite et combat les gingivites, prévient la carie et les pyorrhées alvéolaires. Il assainit les dents, laisse dans la bouche une délicieuse impression de fraîcheur, conserve l'éclat, la blancheur et l'intégrité de la dentition.



**Pas de joli sourire
sans de jolies dents**

CHEZ LES PHARMACIENS EXCLUSIVEMENT





**Doppelte Abwehr gegen
die Feinde Ihrer Zähne!**

5 Doramad-Zahnpfleger stellen sich vor



Ich bin die radioaktive Substanz.
Meine Strahlen massieren das
Zahnfleisch. Gesundes Zahn-
fleisch - gesunde Zähne.



Ich bin die medizinische Seife -
mein Schaum reinigt die ganze
Mundhöhle bis in alle Winkel.



Ich - der Emulgator - Sorge
dafür, daß „DORAMAD“
immer sahnig und frisch bleibt!



Ich bin das Aroma - durch mich
erfrischt „DORAMAD“ köstlich
die gesamte Mundhöhle!



Ich - der ganz feine Putzkörper
- mache die Zähne blendend
weiß, schone den Schmelz!

**Das ist die radioaktiv biologisch wirksame
Zahncreme**



KLEINE TUBE 45 g
GROSSE TUBE 75 g

EIN ERZEUGNIS DER
AUERGESSELLSCHAFT A.G. BERLIN N. 65



After make up you can wear
radioactive clothes

Radioactive woolen cords



Radioactive woollen underwear



For suitable shoes: Shoe-fitting Fluoroscope



- 1919
- Test: 20-45 s
- 0.15-0.7 Gy / min (foot)
- Dermatitis
- Shoe model → leg amputation
- Working apparatus (1950):
 - USA 10 000,
 - Canada 3000,
 - UK 1000 pieces



CERTIFICATE

SHOE-FITTING TEST DATA FOR _____

1. ANKLE ROLL GOOD ☐ FAIR ☐ POOR ☐

2. WEIGHT DISTRIBUTION



LEFT RIGHT
 _____% BALL _____%
 _____% OUTER _____%
 _____% HEEL _____%

RIGHT
WAY

WRONG
WAY

3. X-RAY FITTING TEST



LEFT RIGHT
☐ GOOD ☐
☐ FAIR ☐
☐ POOR ☐

RIGHT
WAY

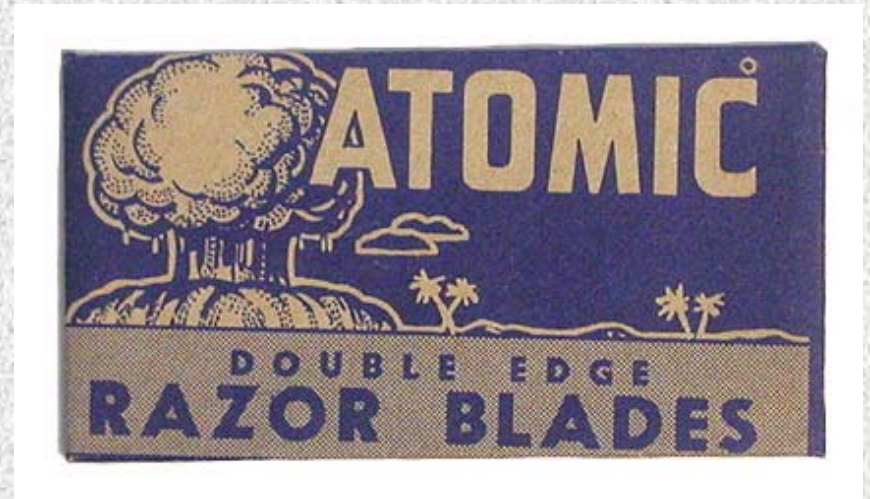
WRONG
WAY

This scientific way of approaching the problem of poorly-fitted shoes eliminates guesswork. Now you can see for yourself!

For cleaning the shoes
„shoe cream“



For shaving → razorblades



Some gifts for date

Radium Chocolate

(Burk & Braun, Germany) 1931- 36

- Restore to youth



80's bijou



- Dose rate: 70 – 90 $\mu\text{Sv/h}$
- 10 h/week estimated dermal dose: 40 mSv/a

jewellery from old watches (1985-1988)



California, Oregon, Texas
and Pennsylvania.

Homemade

Other accessories (cigarettes, matches)



Chewing gum 1980



1 g chewing gum:

- 0.26 Bq ^{238}U
- 0.26 Bq ^{226}Ra .



Moderate dinner

Plate, bowl (1930-1959)



- Glaze 14% Uranium
- 4,5 g U_n
- 1936 - 1943 U_n
- 1959 -1973 U_{depleted}
- Few million pieces

Surface dose rate:

- 5 - 320 $\mu\text{Sv/h}$
- lips 4 mSv/a
- Fingers 12 mSv/a

Bread (containing radium)

Diät-Speisehaus

für vegetarische Kost und Rohkost

Reichenberg

Wienerstrasse 14, im Unionhaus.

RADIUM.
WASSER-ZWIEBACK



Großbäckerei
Hippmann-Blach
St. Joachimstal.

Unter Zusatz von St. Joachimstaler Radiumwasser.

Prämiert mit der goldenen Ausstellungsmedaille.

EREDETI
RADIUMVIZES
KÉTSZERSÜLT

TÁPMŰVEK:
HIPPMANN-BLACH
ST. JOACHIMSTAL



Arany minőségi éremmel kiállított.

*A gyártása St. Joachimstali radiumvíz
hozzáadásával történik.*

And butter



Suitable glasses



A cup of chocolate



Burk & Braun
RADIUM
SCHOKOLADE

zum Essen und Trinken
(NACH Dr. SENFTNER D.R.P.)

Sind Sie gesund, so erhalten Sie dadurch Ihr kostbares Gut, sind Sie leidend, so erhöhen Sie Ihre Aussicht, wieder gesund zu werden!

Versuchen Sie auch die übrigen Burk & Braun-Edelerzeugnisse: Kakao, Schokolade, Pralinen, Sie werden darin Ihre Marke finden, denn alles, was den Namen *Burk & Braun* trägt, ist einzigartig köstlich!

BURK & BRAUN
KAKAO- u. SCHOKOLADENFABRIK
C O T T B U S

Or a bottle of water with radon

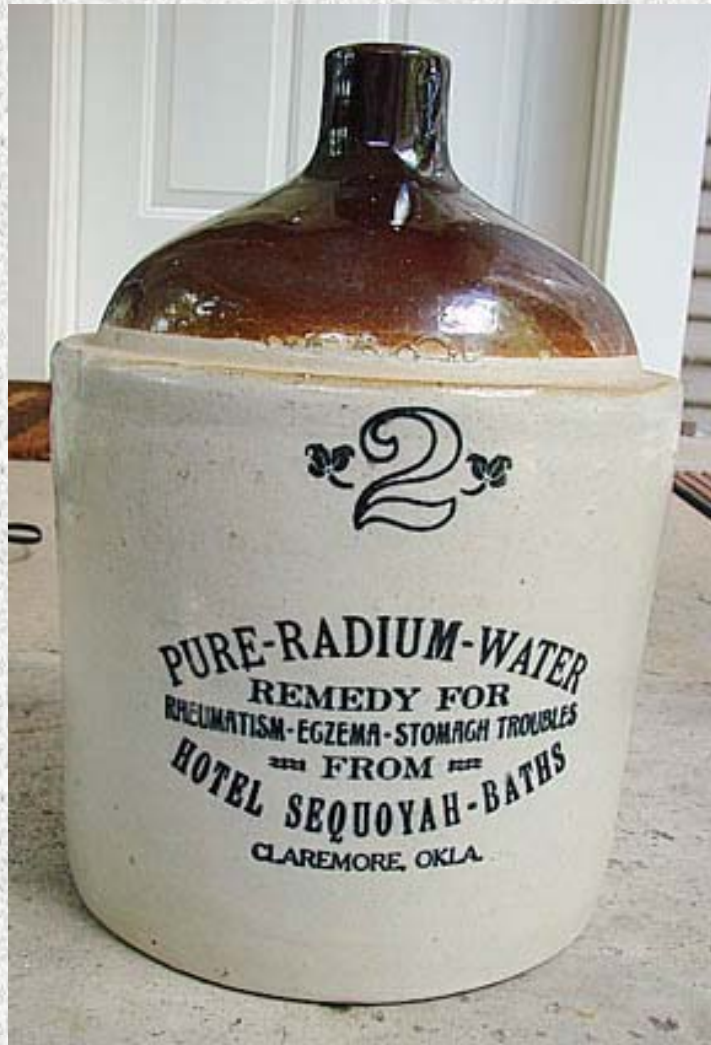
Radonite Jar (late 1920s, early 1930s)

Container of high radium
concentration ore



Later it is suitable for Sepulchral urne

Other types of radium-water apparatuses





- Used in hospitals
- 150 000 pieces (1926)

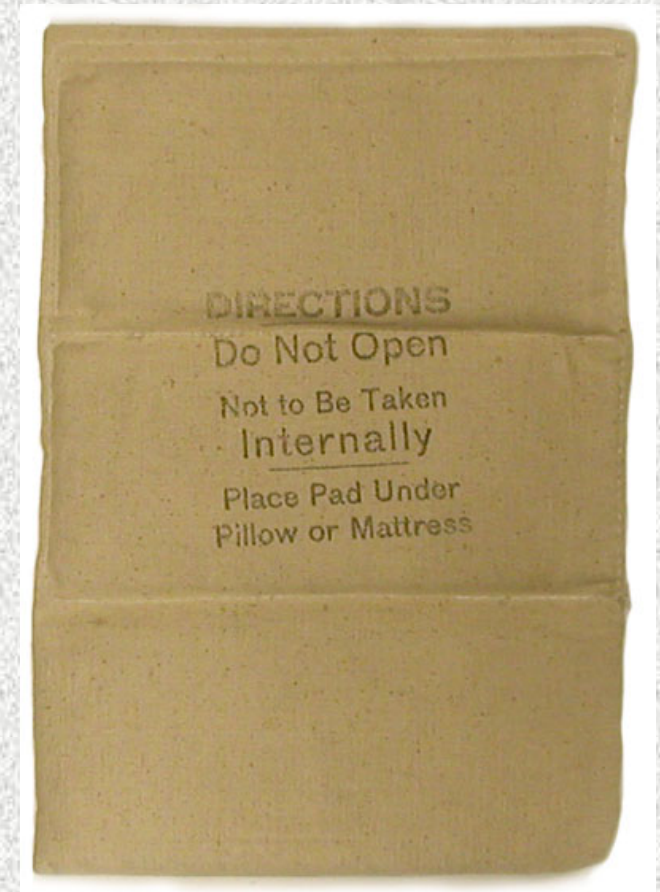
Portable type

- For example if you travel to an radon intercomparison



When we finally reach our aim

Cosmos Radioactive Pad (1928)



- Uranium ore pillow
- 500 nGy/h → 30 cm

Protection



It increases the sexual performance



Nutex GIVES YOU EXTRA STRENGTH

*At the top is an actual reproduction of an inflated NUTEX rubber prop. Such is the strength of each NUTEX phylactic. NUTEX gives you the strength—that extra-safety—the safe protection every time. And you the sheer-thinness of each "NUTEX" they give greater satisfaction, too!

YOU CAN DEPEND ON

Don't TAKE CHANCES

Aphrodisiac

Sand bath on the beach in Brasil

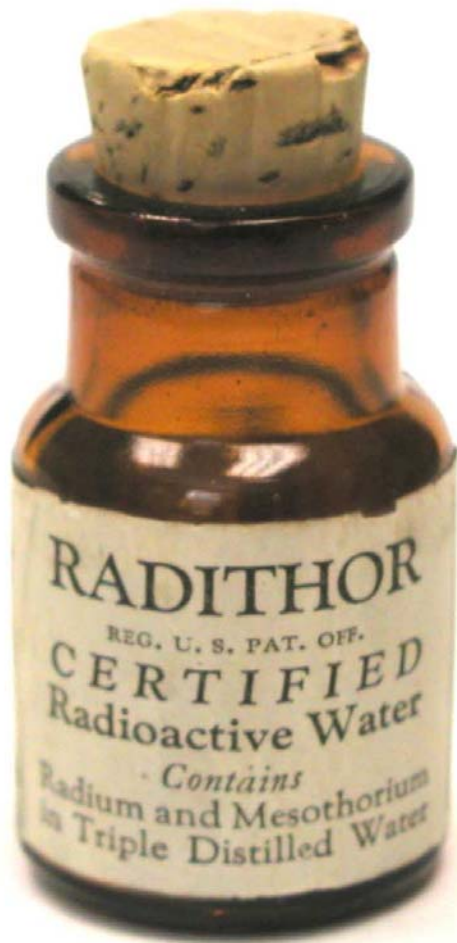
Radium equivalent:

- Buena (RJ) → 1621 Bq/kg,
- Anchieta (ES) → 2289 Bq/kg,
- Meaípe (ES) → 10 205 Bq/kg,
- **Guarapari (ES) → 83 425 Bq/kg,**
- Serra (ES) → 2026 Bq/kg,
- São Mateus (ES) → 3240 Bq/kg,
- Porto Seguro (BA) → 3075 Bq/kg,
- Mambucaba (RJ) → 696 Bq/kg,
- Itacaré (BA) → 1841 Bq/kg.

5 (50) $\mu\text{Sv/h}$ dose rate

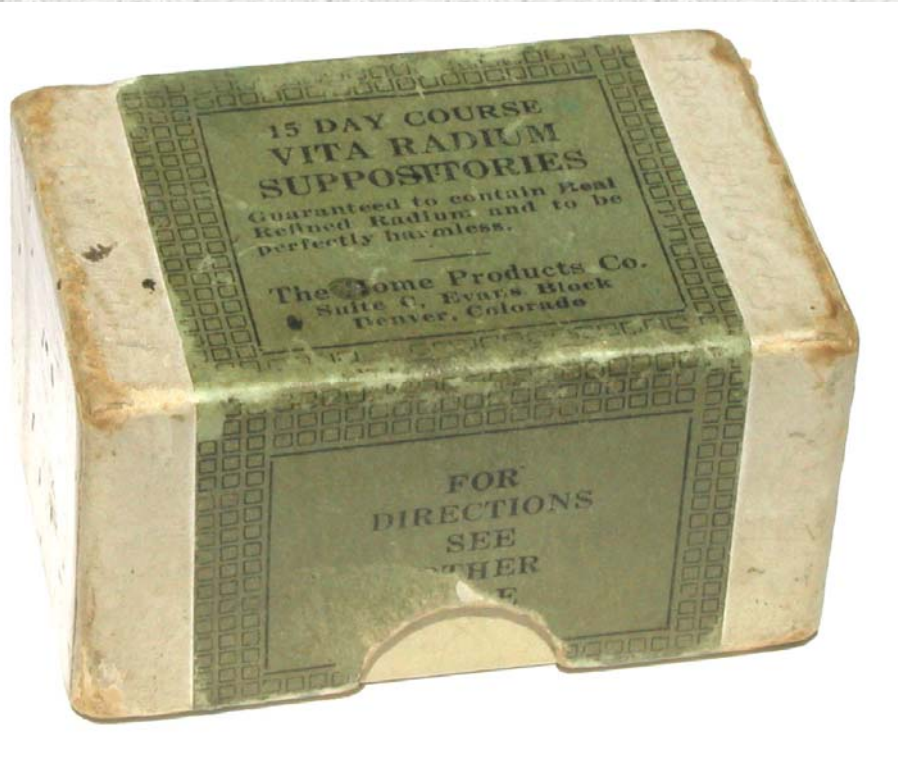


„Radithor” radium solution -1928 **radioactive water**



- min. 37 kBq Ra-226 and Ra-228
- 3 glass/ day
- stimulating,
- relaxing
- **increase the sexual potencial**
- M. Byers death due to — Radithor- 1932

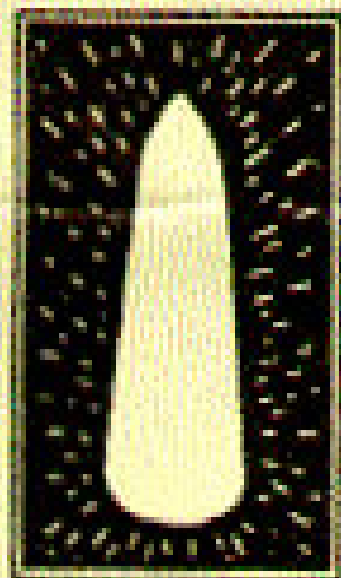
„Vita Radium Suppositories” – 1930



- for man who has sexual problem,
- Increase the sexual potencial
- **It ensures the experience of the absolute pleasure**

VITA RADIUM SUPPOSITORIES

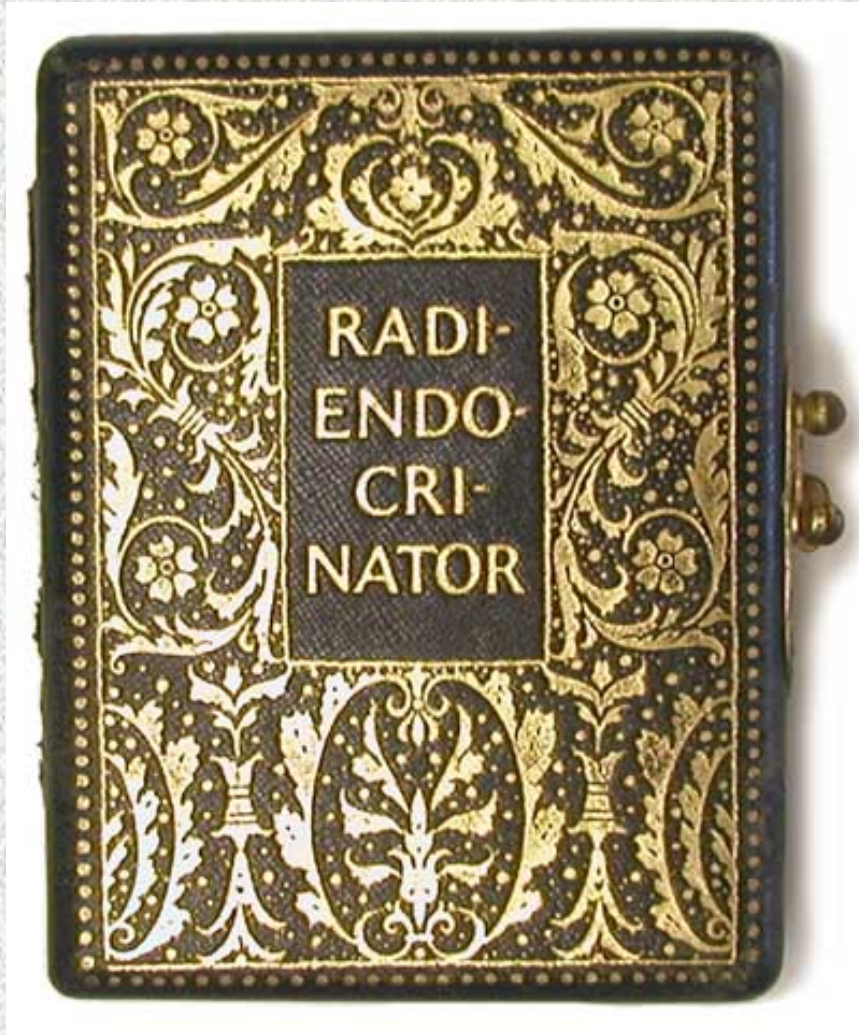
FOR RESTORING SEX POWER



Actual Size
of Vita Radium

VITA RADIUM SUPPOSITORIES, for rectal use by men, are tone restorers of sex and energizers for the entire nervous, glandular and circulatory systems. These Suppositories contain a result-producing amount of highly refined soluble RADIUM, carried in a cocoa butter base. The radium is absorbed thru the walls of the lower colon, enters the blood stream and is carried to all parts of the body—to the weakened organs that need its vitalizing aid. After leaving its durably HEALTHY RESULTS, the radium is gradually eliminated in about three days. Vita Radium Suppositories are guaranteed entirely harmless. Recommended for sexually weak men who, however, should use the NU-MAN Tablets in connection for best results. Also splendid for piles and rectal sores. Try them and see what good results you get!

Radiendocrinator (ca. 1930)



- For endocrine glands
- 2 mGy/h
- Producer died in kind of endocrine gland cancer

Köszönöm az aktív figyelmet!
Thank you for your active attention!

