

SEBUMSCALE

SKIN SEBUM
MEASUREMENTS MADE EASY



SEBUMSCALE

- Sensitive, accurate and reliable sebum measurements
- Fast and convenient measurements
- Battery operated
- Fully portable
- Disposable sebum sensors
- Wireless data collection with Delfin Modular Core software



SEBUMSCALE

- Measures in micrograms
- Built-in microbalance – no separate desktop unit needed
- Utilizes advanced quartz crystal sensor technology



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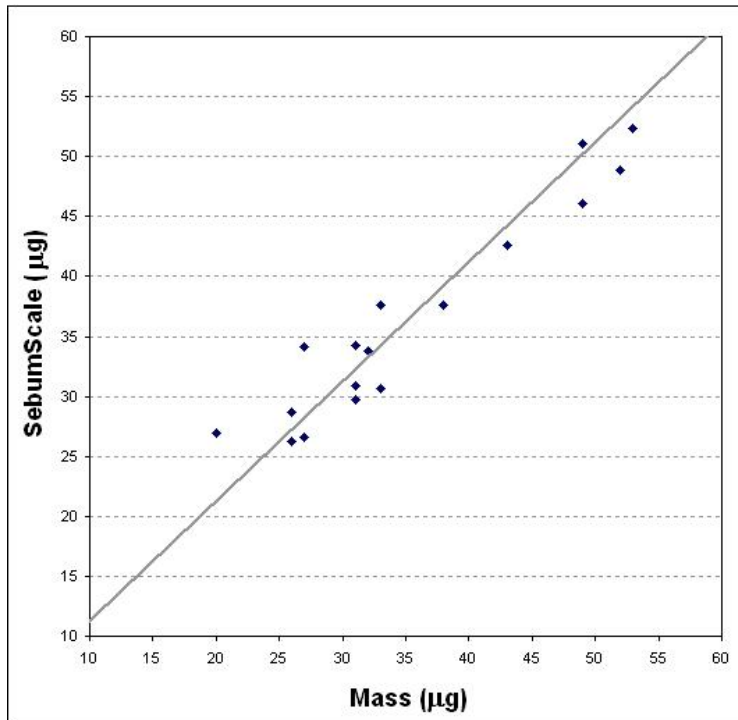
MEASUREMENT PRINCIPLE

- Based on quartz crystal microbalance technology
 - Quartz crystal sensor absorbs sebum from the skin
 - Sebum on the measurement sensor changes the quartz oscillation frequency
 - Frequency change Δf is proportional to the amount of sebum Δm on the measurement sensor

$$\Delta f = \frac{-2f_0^2 \Delta m}{A(\rho_q \mu_q)^{1/2}}$$



SEBUMSCALE VALIDATION

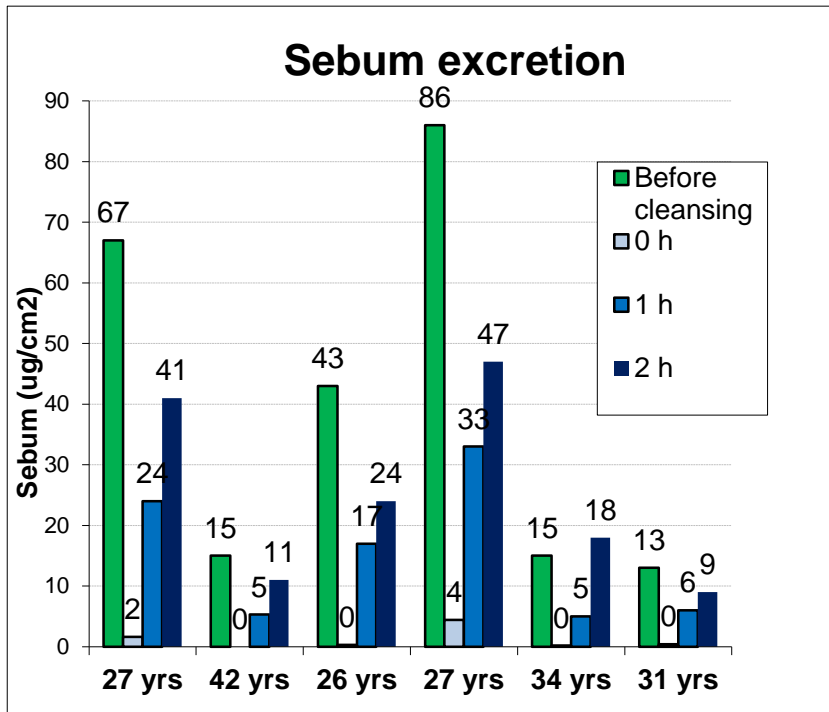


An excellent correlation ($R^2=0,984$) was found between the SebumScale device readings calculated from the sebum-induced changes in quartz crystal oscillations and an independent gravimetric method.



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EXAMPLE



Individual sebum excretion values of six volunteers (26 - 42 years old) measured with the SebumScale before and after facial cleansing.

Conclusion

There is a wide variation between typical healthy human skin's sebum excretion rates



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APPLICATION AREAS

- Product and formulation R&D in pharmaceutical, personal care and chemical industries
- Claims validation work
- Efficacy testing
- Skin research studies
- Assessment of skin types
- Evaluation of skin care and treatments
- Marketing and promotion of skin care products



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