



Mikuni American Corporation

Revenir Clinical Studies

- In Vitro Percutaneous Absorption Study
- Facial Fine Line/Wrinkle Study
- Facial Skin Lightening Study



In Vitro Percutaneous Absorption “Experimental Design”

- Franz Cell
- Mass Balance Study (Skin Surface, Epidermis, Dermis)
- Frozen Female Cadaver Face Skin
- Single Dose- 10 second spray- 8” from chamber
- Sample Chamber Under Skin at 2, 6, 12, 23, and 35 hours after dosing for Vitamin C

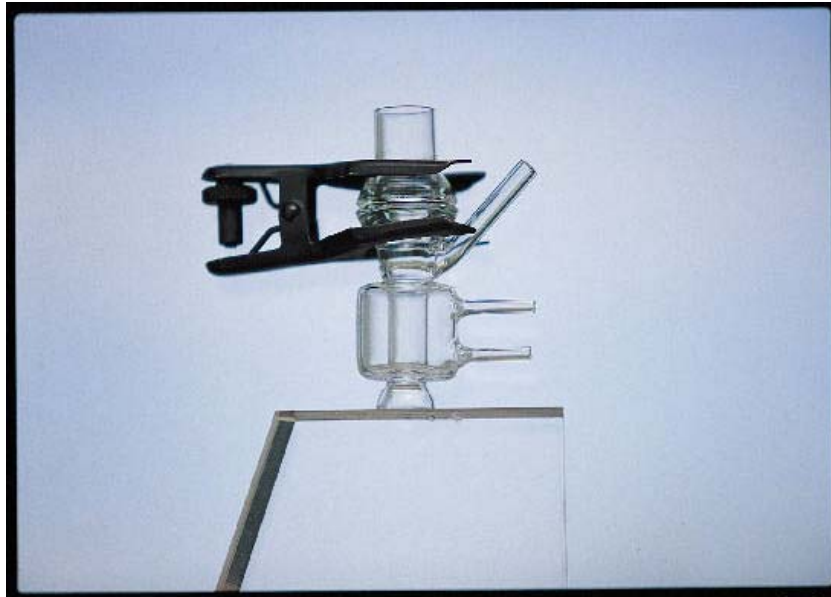
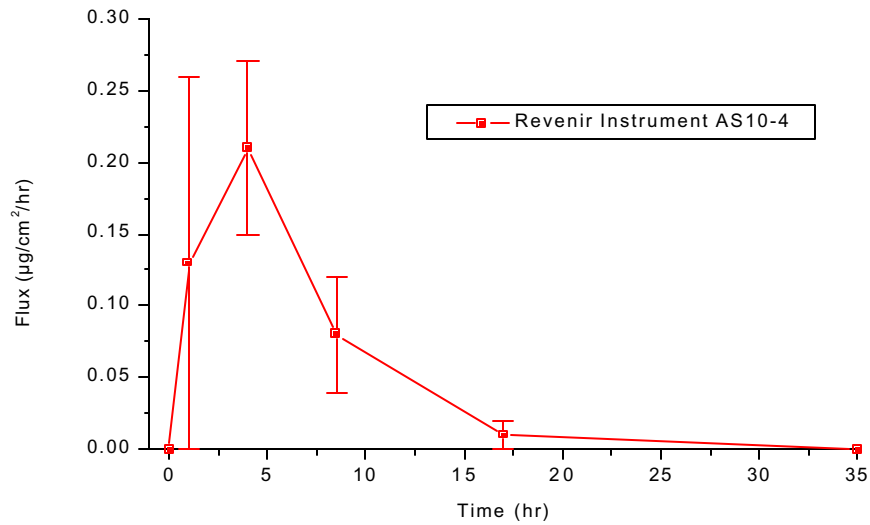


Figure 1: Percutaneous Absorption of Ionized Ascorbic Acid: Flux Results
 (Mean \pm SE from 3 Donors as $\mu\text{g}/\text{cm}^2/\text{hr}$)



Absorption Results

Parameter	μg Vitamin C
Receptor Fluid	1.35 ± 0.54
Dermis	5.46 ± 0.85
Epidermis	6.14 ± 1.81
Unabsorbed Surface Wash	53.65 ± 11.61



Fine Line / Wrinkle Study “Design”

- 20 Caucasian Females, 35-75 years of age
- Mild to Moderate Fine Line/Wrinkles in the Crow’s Feet Area
- 12 Weeks of Daily Treatment (AM/PM)
- Silicone Replicas Taken of the Crow’s Feet Area at Baseline and After 6 and 12 Weeks of Treatment



Silicone Replica Technique

- Negative Replica of Skin Contour
- Catalyzer is Added to Silflo Resin and Mixed with Panelist Lying Down, the Silflo Resin is Evenly Spread Over the Crow’s Feet Area of the Eye
- After 2-3 Minutes of Drying, the Silicone Replica is Peeled from the Skin



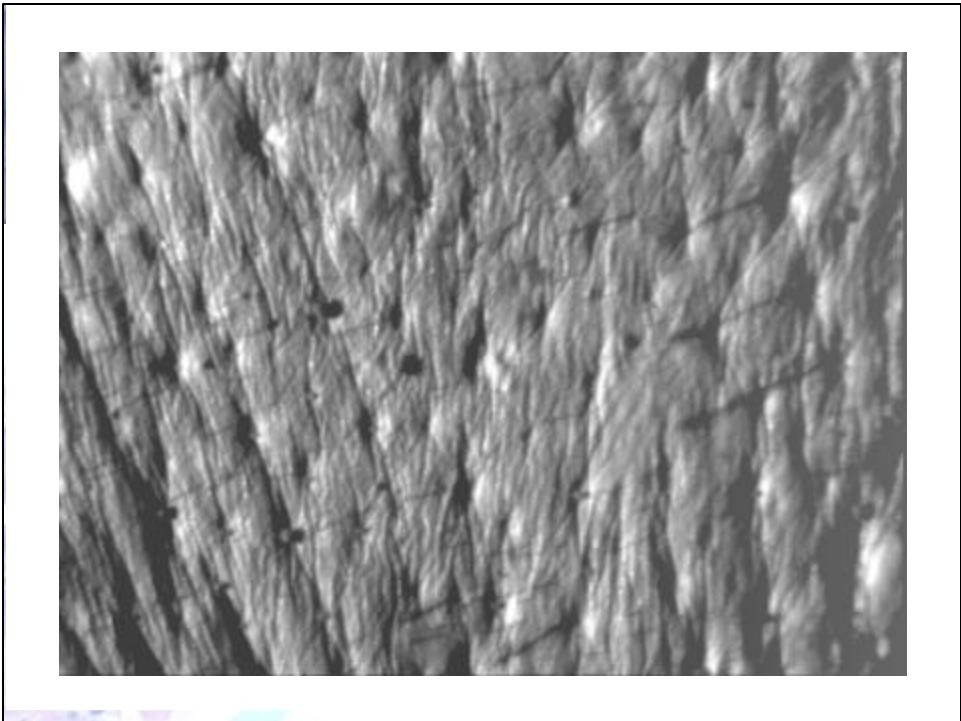


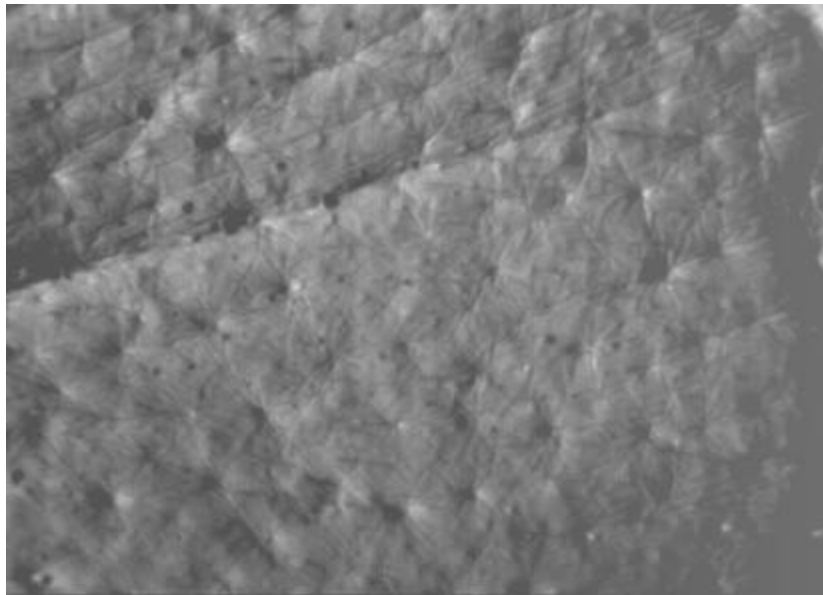
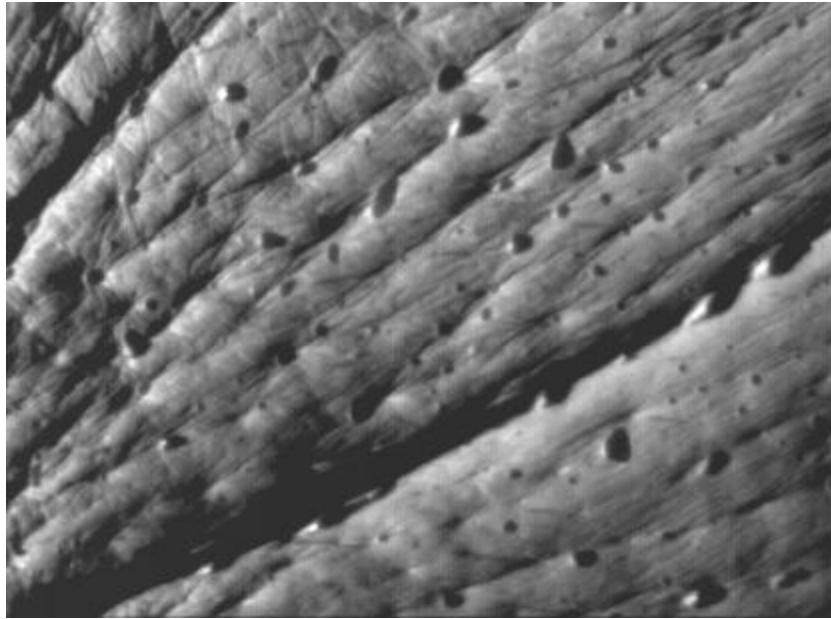
Image Analysis of Silicone Replicas

"Parameters Measured"

- Rz and Ra - "Roughness" ↓ = smoothness
- Breadth - "Wrinkle Depth" ↓ = reduction
- NumWr - "Number of Wrinkles" ↓ = reduction
- FSpace - "Distance Between Lines" ↑ = smoothing
- FNum - "Number of Lines" ↓ = reduction
- Shadows - "Area of Wrinkles" ↓ = smoothing







Wrinkle Image Analysis Data

Parameter	6 Weeks	12 Weeks
Rz (roughness)	Up to a 32% 16/26 Subjects	Up to a 84% 21/27 Subjects
Ra (roughness)	Up to a 43% 20/26 Subjects	Up to a 83% 20/27 Subjects
NumWr (number of)	Up to a 21% 11/26 Subjects	Up to a 77% 17/27 Subjects
FSpace (distance between Wrinkles)	Up to a 273% 22/26 Subjects	Up to a 326% 22/27 Subjects



Skin Lightening Study “Design”

- 25 Females, 35-75 Years of Age
- Macular Hyperpigmentation of the Face Caused by UV Radiation, Hormonal Influences, and/or Genetic Predisposition
- Chromameter[®] Readings of the Face for Changes in Color at Baseline and After 6 and 12 Weeks of Treatment



Chromameter

- Instrument to Quantify Changes in the Color of Skin
- Parameters Measured
 - a* (red to green)
 - L* (white to black)
 - b* (yellow to blue)



Chromameter Data

"Normal Skin"

	<u>6 Weeks</u>	<u>12 Weeks</u>
<u>Redness</u>	Up to a 25% ↓ 17/27 Subjects	Up to a 29% ↓ 17/27 Subjects
<u>Translucence/ Clarity</u>	Up to a 12% ↑ 15/27 Subjects	Up to a 26% ↑ 27/27 Subjects



Chromameter Data

"Hyperpigmented Skin"

	<u>6 Weeks</u>	<u>12 Weeks</u>
<u>Redness</u>	Up to a 29% ↓ 19/27 Subjects	Up to a 40% ↓ 24/27 Subjects
<u>Translucence/ Clarity</u>	Up to a 18% ↑ 17/27 Subjects	Up to a 20% ↑ 26/27 Subjects



Conclusions

- Unique Delivery Device
- Delivers Vitamin C to the Dermal Layer of the Skin
- Improves the Appearance of Facial Wrinkles Leading to Smoother Skin
- Improves the Discoloration of Facial Skin Leading to a More Even Skin Tone

