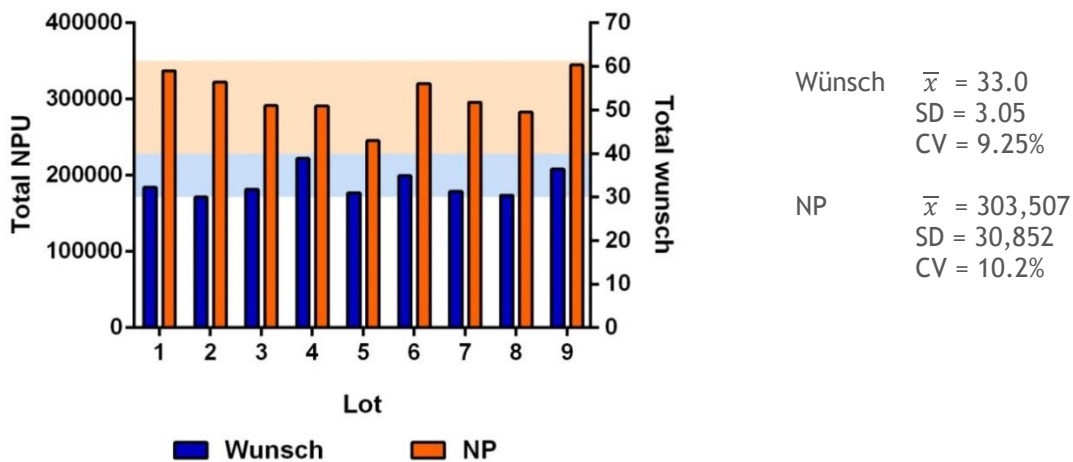


# AS GMP Grade

## Confidence Reflects Consistency

Confidence reflects the trust you gain when VitaCyte’s enzymes are used to isolate human adipose stromal vascular fraction (ASVF) cells from lipoaspirate or minced adipose tissue. Your confidence is assured by VitaCyte’s commitment to tightly control all aspects of the enzyme manufacturing/purification process coupled with use of kinetic functional assays to assess enzyme activities in the final purified enzyme products. Product specifications are defined by a lower and upper limit of enzyme activity, ensuring the product purchased today will be the same as the one you purchase in the future.



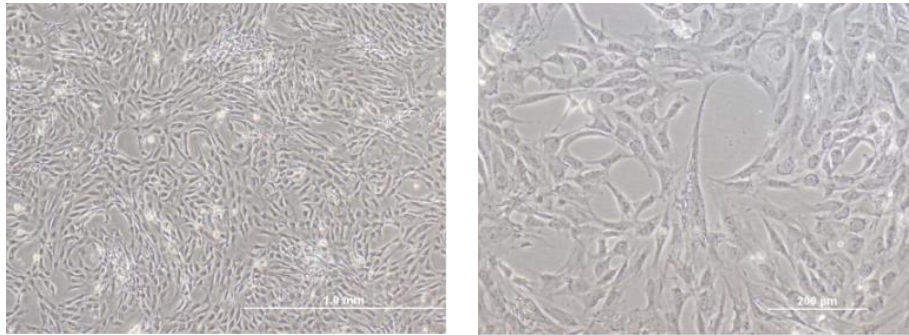
The chart above shows key enzymatic activities from nine consecutive lots of Clzyme AS GMP Grade product. The blue and orange bars reflect the total Wunsch and neutral protease (NP) activity units in a vial from nine separate lots of product(1,2). The shaded areas represent the corresponding range of acceptable enzyme activities as defined by product specifications.

## Lower Risk, Greater Confidence in ASVF Recovery

CONSISTENCY	CONVENIENCE	COST EFFECTIVE
<ul style="list-style-type: none"> <li>Highly purified, removal of adverse contaminants</li> <li>Enables standardization of methods</li> <li>Leads to confidence when comparing results between labs</li> </ul>	<ul style="list-style-type: none"> <li>Single use reconstitute and use vial</li> <li>AS product used in several reports on isolation methods(3,4)</li> </ul>	<ul style="list-style-type: none"> <li>Lowest priced GMP Grade enzyme on the market</li> <li>No requirement to prequalify lots of product</li> </ul>

## Gentle & Effective

AS is composed of purified, intact, class I and class II *Clostridium histolyticum* collagenase supplemented with purified BP Protease (a Dispase™ equivalent enzyme). Intact collagenase is more effective than degraded collagenase in recovering cells from tissue(5). BP Protease is a gentler enzyme than Thermolysin for recovery of functional cells from tissue(6).



Human ADSC were isolated using the recommended dose of VitaCyte AS. Photomicrographs above are 4x (A) and 10x (B) images of ADSC plated for 40 minutes on 1% gelatin coated polystyrene tissue culture flasks immediately after isolation. Photomicrographs courtesy of Jay Hoying at Riveria Medical Technologies, Louisville, KY.

## Ordering

PRODUCT	CATALOG	APPLICATION
AS	005-1090	Human lipoaspirate (100 cc)

To locate a distributor in your region please visit [www.VitaCyte.com/contact-us/](http://www.VitaCyte.com/contact-us/). If your country is not currently served by one of our distributors, contact us to discuss direct shipment of product to your location. Orders outside the U.S. may require a customs broker.

International orders are shipped Monday - Friday via FedEx International Priority Service. Some products are shipped on dry ice.

## References

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3. Aronowitz JA, Lockhart RA, Hakakian CS. A Method for Isolation of Stromal Vascular Fraction Cells in a Clinically Relevant Time Frame. Methods in Molecular Biology (Clifton, NJ). 2018;1773:11-9.
4. Aronowitz JA, Lockhart RA, Hakakian CS. Mechanical versus enzymatic isolation of sstromal vascular fraction cells from adipose tissue. SpringerPlus. 2015;4:713.
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