

# Wound Dressing Comparison: Free Swell Absorptive Capacity Summary

## EXECUTIVE SUMMARY

Thirteen RTD™ Wound Dressing samples from different lots were analyzed for free swell absorptive capacity. The free swell absorptive capacity results of these lots are averaged and presented in this report. The average free swell absorptive capacity of the RTD™ Wound Dressings analyzed is approximately 14.5 gram of solution per gram of dressing.

## PURPOSE

This laboratory report summarizes the free swell absorptive capacity assays performed on thirteen lots RTD™ Wound Care Dressing from January to September 2017.

## REPORT IDENTIFICATION

The original free swell absorptive capacity results were reported in the following reports:

1. ME-17-0125-01
2. ME-17-0509-01
3. ME-17-0628-01
4. ME-17-0911-01

## MATERIALS

The scope includes the materials, equipment, methods, results, and associated data from performed experiments. The following samples were drawn from LOT numbers:

1. 1576
2. 1302
3. S931298-Beginning
4. S931298-Middle
5. S931298-End
6. S931622-Beginning
7. S931622-Middle
8. S931622-End
9. S931298-S932629
10. S931622-S93259
11. S931622-S932542
12. S931622-S932742
13. 27016

### RTD™ Wound Dressings

The RTD™ Wound Dressing samples were received on different days in 2017. Some of the RTD™ Wound Dressings were packaged in large Ziploc bags, and some were individually packaged and sterile-sealed. The RTD™ Wound Dressings received were of different sizes and thicknesses.

### Incubator

A Shel Lab SI-9 incubator was used to pre-heat the test solution and also incubate the solution swollen RTD™ Wound Dressings.

## METHODS

Test method was according to EN 13726-1 Section 3.31. The RTD™ Wound Dressings were cut into ~5 cm x ~5 cm sections, which were then weighed and placed in individual petri dishes of 95 mm in diameter, or appropriate containers when the assay required larger volumes of test solution (142 mM NaCl and 2.5 mM CaCl). The test solution was pre-heated to 37 °C. Test solution equivalent to 40 times the mass (± 0.5 g) of each wound dressing section was added to each petri dish. Each sample was incubated at 37 °C and relative humidity of 52-58 % RH, with air circulation, for 30 minutes. At the end of each incubation, the wound dressing sample was suspended with forceps by one corner or by one end for 30 seconds, then the weight was recorded. The same procedure was repeated for each wound dressing section. At least ten replicates were performed for each lot of RTD™ Wound Dressing.

## RESULTS

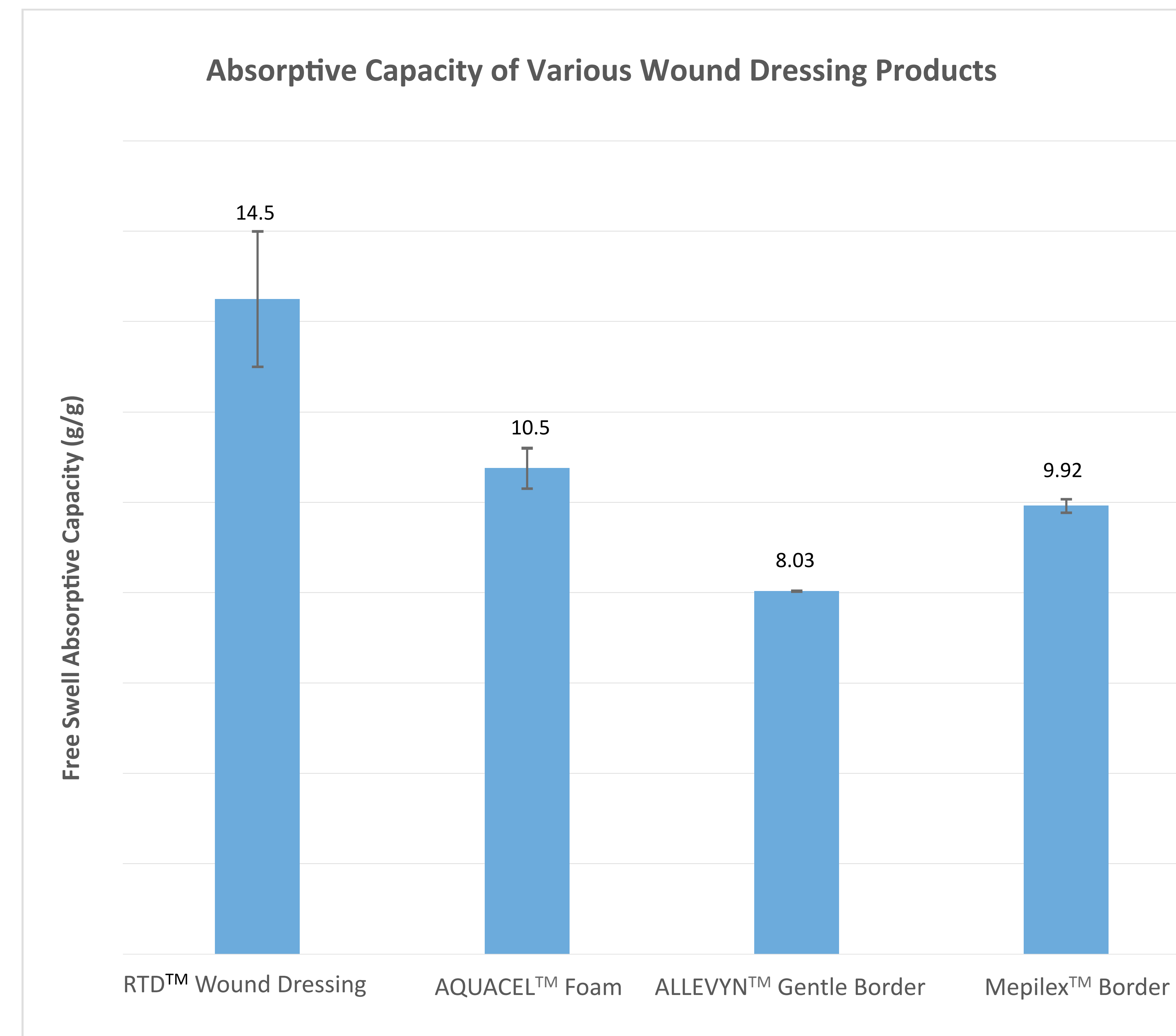


Figure 1. Graphical presentation of absorptive capacity comparison of different products

Product	Absorptive Capacity (g/g)
RTD™ Wound Dressing	14.5 ± 1.5
AQUACEL™ Foam	10.75 ± 0.45
ALLEVYN™ GENTLE BORDER	8.03 ± 0.01
Mepilex™ Border	9.92 ± 0.15

Table 1. Absorptive capacity comparison of different products

Average Free Swell Absorptive Capacity of RTD™ Wound Dressing	14.5
---	------

Table 2. Average Free Swell Absorptive capacity of RTD™ Wound Dressing

The free swell absorptive capacity of each lot of the RTD™ Wound Dressing is summarized in Table 1. The average results and the standard deviation from 10 replicates of each lot (except for Lot 1576, which 12 replicates were assayed) are shown in Table 2. The results are reported as gram of solution retained per gram of wound dressing (g/g).

RTD™ Wound Dressing Sample LOT	Series #	Free Swell Absorptive Capacity (g/g)
1576	None	14.9 ± 0.5
1302	None	13.0 ± 0.5
S931298	Beginning	15.3 ± 0.5
S931298	Middle	15.2 ± 0.5
S931298	End	16.6 ± 0.5
S931622	Beginning	16.1 ± 0.5
S931622	Middle	16.2 ± 0.5
S931622	End	15.0 ± 0.5
S931298	S932629	12.9 ± 0.5
S931622	S932741	12.5 ± 0.5
S931622	S932542	13.1 ± 0.5
S931622	S932589	12.0 ± 0.5
27016	None	15.1 ± 0.5

Table 3. Absorptive capacity of RTD™ Wound Dressings.

## CONCLUSION

The tested average free swell absorptive capacity of RTD™ Wound Dressing is an impressive 14.5 g/g. The free swell absorptive capacity of RTD™ Wound Dressing is compared to the reported values of the wound dressing products from other manufacturers in Table 1 and Figure 1.

## REFERENCES

1. BS EN 13726-1:2002. Test methods of primary wound dressings. Part 1: Aspects of absorbency, Section 3.2.
2. Bishop, SM, et al, 2013. A comparison of the in vitro bio-physical performance characteristics of silicone foam dressings used in wound management. ConvaTec product bulletin.