



## IDFL Calendar

- 23 – 25 September EDFA Meetings
- 10 – 12 November Down Festival in Lu'an
- 07 – 10 December China International Down & Feather Exposition in Xiaoshan – Market Reports, Seminars, Tours of IDFL China Office

For more information about any of the above events please contact [info@idfl.com](mailto:info@idfl.com) for more details.

## Durable Water Repellency Testing

IDFL has been doing research on all kinds of down treatments for years. IDFL has been researching and testing the following:

- DWR
- Antimicrobial treatments
- Odor masking treatments
- Treatments to increase fill power
- Optical brighteners and other finishing agents

IDFL has been testing many different DWR treatments for outdoor brands, down processors, manufacturers and retailers. IDFL has a comprehensive testing package for DWR testing. Not only does IDFL test the down & feathers for the water repellency claims, but IDFL also does a complete testing package to make sure that the other performance factors of down are not sacrificed in the effort to increase water repellency.

IDFL has developed its own testing standards for testing DWR treatments, but welcomes down processors, brands and others in the industry to help in establishing industry wide testing standards for these treatments.

## IDFL DWR Testing

There are various types of water repellency treatments that have different effects on the down. DWR testing is performed in order to inspect the specific claims and qualities of a water repellency treatment and evaluate the effectiveness of the treatment.

## *Does the treatment affect common characteristics of down such as content or fill power?*

- **Standard Core Tests:** The following tests are performed on both treated and untreated samples in order to understand the effects of the treatment:

- Content Analysis
- Species Identification
- Moisture immediately upon arrival
- Down cluster size
- Fill Power
- Fat and Oil
- Oxygen Number
- Turbidity
- Odor

## *Does the treatment change the way the down looks or feels?*

- **Physical Comparison:** provides a comparison between treated and untreated down samples.

- Appearance
- Feel
- Odor
- Additional Observations



## IDFL LABORATORY AND INSTITUTE

Certified Laboratory: IDFB • EDFA • DPSC

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## *How well does the treatment repel water?*

- **Hydrophobic Shake Test:** The down sample is machine shaken in a container of water for timed increments until *one* of the samples reaches complete saturation in order to demonstrate the improvement of a given treatment.

The down sample is machine shaken in a container of water for timed increments until *both* samples reach complete saturation. This provides a time difference of how much longer the treated down lasts in wet conditions compared to the untreated down.

## *What are some of the water-resistant effects of the treatment?*

- **Added Water Weight Test:** The down sample is machine shaken for half the time it takes the untreated down to become completely saturated in order to see how much water weight is added at the moment the sample starts breaking down in the presence of water.

## *How much water absorption does the treatment reduce?*

- **Water Absorption (EN 13543):** The sample is weighed before and after completely submerging the down in water for a set amount of time in order to calculate the percentage of water weight that the down absorbs.

## *Will the treatment come off after washing?*

### - Laundry Durability Test:

- Fill Power after 5 and 10 washes- Compares the fill power results before and after washing.
- DWR tests after washing- DWR tests are performed again after washing the sample to see how the treatment reacts to the washing process.

## **For More Information**

IDFL welcomes those interested in more information about DWR testing to visit its lab to see the testing being done. IDFL has prepared a presentation about the testing that can be presented in a webinar. Please contact [info@idfl.com](mailto:info@idfl.com) to schedule a lab tour or webinar.

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