



Learn more about how AB20® can support your success by helping you manage your feed quality challenges.

phone: 800.677.4623  
www.pahc.com



***Not All Binders Are Created Equal.***

**Phibro**  
ANIMAL HEALTH CORPORATION

HEALTHY ANIMALS. HEALTHY FOOD. HEALTHY WORLD.®

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**AB20**®

### Reliable Performance. Consistent Quality.



Aquaculture feeds and moisture are two opposing forces that continually challenge feed manufacturers and aquaculture producers alike.

Feeds and grains are ideally stored with moisture concentrations of less than 13 percent, to help “compensate for non-uniform moisture concentrations throughout the grain mass” (Whitlow, 2005, Proceedings, Florida Ruminant Nutrition Conference, Gainesville).

Feed that has been stored at a high moisture level may cause reduced flowability, have the potential to cake and be more prone to increased mold growth. The real world is less than ideal, and feeds and grains exposed to moisture concentrations greater than 15 percent are more susceptible to mold contamination (Whitlow, 2005). Mold growth may lead to mycotoxin formation during manufacturing, storage, delivery and feeding of the animals.

#### Common Molds and Their Mycotoxin Products in Aquaculture

| Mold Species                     | Mycotoxins Produced  |
|----------------------------------|--|
| <i>Aspergillus parasiticus</i>   | Aflatoxins B <sub>1</sub> , B <sub>2</sub> , G <sub>1</sub> , G <sub>2</sub> |
| <i>Aspergillus flavus</i>        | Aflatoxins B <sub>1</sub> , B <sub>2</sub>                                   |
| <i>Fusarium sporotrichioides</i> | T-2 Toxin  |
| <i>Fusarium graminearum</i>      | Zearalenone & Deoxynivalenol   |
| <i>Fusarium moniliforme</i>      | Fumonisin B <sub>1</sub>   |
| <i>Penicillium verrucosum</i>    | Ochratoxin A   |
| <i>Aspergillus ochraceus</i>     | Ochratoxin A   |

**AB20® specialty product** is a bentonite adsorbent, containing hydrated sodium and calcium aluminosilicates, that reduces caking and flowability issues by binding moisture that is present in feed. Lower moisture in feed reduces the potential for mold growth—and lowering mold growth in feed improves its quality. This is important when you consider that some molds can produce a wide range of harmful mycotoxins.

The use of **AB20 helps reduce mold growth and mycotoxin contamination.**

### Unique From the Start.

It all begins with our unique and proprietary sourcing to identify silicate deposits with the unique qualities of **AB20** that provide effective performance and excellent flowability—all at a low usage rate for enhanced value from the start.

To ensure you receive consistent and effective performance, we test **AB20** in both in vitro and **live animal research trials**, backed by our team of experts who provide extensive experience and strong technical knowledge for reliable on-farm support.

#### Signs & Symptoms in Aquatic Species

| Animal                  | Shrimp  | Fish   |
|-------------------------|---|--|
| Poor Growth Performance | Reduced growth rate   | Reduced growth rate                            |
|                         | Low apparent digestibility  | Low weight gain                                |
|                         | Higher mortality rate   | Higher mortality rate                          |
| Severe Health Damage    | Negative effect on digestive enzymes                                | Severe hepatic necrosis                        |
|                         | Hepatopancreatic damage   | Enlarged liver                                 |
|                         | Lower hematocrit value (reduced number and size of red blood cells) | Impaired blood clotting, anemia and pale gills |
|                         |   | Pale to yellow kidney lesions                  |



While multiple solutions are available to help manage mycotoxins in your animals, only **AB20** offers the trusted partnership of **Phibro Animal Health Corporation**—with research-proven results to ensure healthy animals and a healthy bottom line.

For more information, contact your local Phibro representative or visit [www.pahc.com](http://www.pahc.com).

Trusted Partners.  
**Trusted Solutions.**