

LIPHATECH® INFO

THE RESPONSIBLE NEWSLETTER

July 2020 | No. 2

HOW DO YOU (REALLY) KNOW A RODENT CONTROL PRODUCT **WORKS?**

LT® PROCESS, THE **ULTRA-EFFECTIVE** MANUFACTURING PROCESS



Illustrations by Bruno Grimalt - © LIPHATECH 2020 - All rights reserved.

Free publication for professionals

Use biocide products with caution. Before use, read the product label and product information.

HOW DO YOU (REALLY) KNOW A RODENT CONTROL PRODUCT **WORKS?**

CONTRARY TO WIDESPREAD BELIEF, LD50 IS NOT A GOOD INDICATOR FOR CHOOSING A RODENTICIDE PRODUCT. IT INDICATES THE POTENTIAL TOXICITY OF A SUBSTANCE BUT DOES NOT GUARANTEE THAT THE PRODUCT WILL BE CONSUMED BY THE RODENT.

Toxicologist Eric Blouin explains.

You have most likely heard that the LD50 is what you should pay attention to in order to assess a rodent control product's efficacy.

In fact, it doesn't tell you much. To understand why so many people make this mistake, you first need to understand what the LD50 is and what it's for.

Blouin, expert toxicologist at Physiotox, explains, "The LD50 is mainly used to develop emergency procedures (generally by poison control centres) in case of accidental human exposure, to create directives on the use of appropriate clothing and safety equipment for people when handling the substance, to regulate labelling, issue caution statements and transport conditions, and to help establish limits for professional exposure ».

▶ IT CANNOT BE USED TO COMPARE TWO PRODUCTS...

The LD50 should be considered with care. First, its value may be determined based on various factors, such as the animal species in question as well as the sex, age and weight of the animals used in the test. Furthermore, there are several test protocols and methods available to calculate the LD50 which gives different results for the same product tested.

▶ THE LD50 INDICATES THE POTENTIAL TOXICITY OF A SUBSTANCE

The LD50 (LD stands for lethal dose) is the dose at which a substance is lethal for 50% of the animals in a tested group. It is generally given in milligrams of a chemical substance administered per kilogram of body weight. To determine the oral LD50 value of a substance, toxicologists prefer to use laboratory rats that are force fed the substance in a single dose. These studies aim to identify the acute toxicity of substances and to classify them according to their hazard level (the higher the LD50, the less the toxic the product is). In fact, as Dr Eric

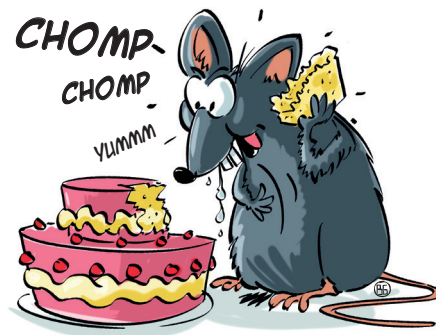
▶ SPOTLIGHT

Acute oral toxicity of a substance corresponds to undesirable side effects that may appear after the administration of a single or multiple doses spread over a 24-hour interval.



► ... NOR TO EVALUATE THE TRUE EFFICACY OF A RODENTICIDE

« You have to remember that LD50 is not a numerical value that corresponds to the toxicity class of a substance » says Blouin. It cannot be used to determine a rodent control product's efficacy because it does not take all criteria into account. To be effective, you should know that a rodenticide must not only be both toxic for rodents (all rodenticides on the market are), but they must also be palatable: if not, the rodent simply won't eat it! In other words, a rodent control product with a lower LD50 than another product may actually be completely ineffective because the rodent doesn't like its taste.



For a rodent control product to be **effective**, it must first be **highly palatable** for the rodent!

► TO (REALLY) ASSESS THE EFFICACY OF A RODENTICIDE, YOU SHOULD TRUST THE FIELD TESTS

To choose a rodent control product, the question you need to ask is: Will the rodent eat the bait? Only field studies can

provide the answer. Liphatech's R&D Department has developed "palatability and field efficacy protocol trials" to assess how well its products are consumed and compare their efficacy against other products on the market. These protocols can replicate the real-world use conditions that customers face: baits are placed on sites where food competition is high (presence of cereals); the target rodents are wild rats that are not forced to eat the bait (no forced feeding but they may eat from several baits). The efficacy of the rodent control product is then measured based on the level of consumption and the absence (or not) of rodents at the end of treatment.

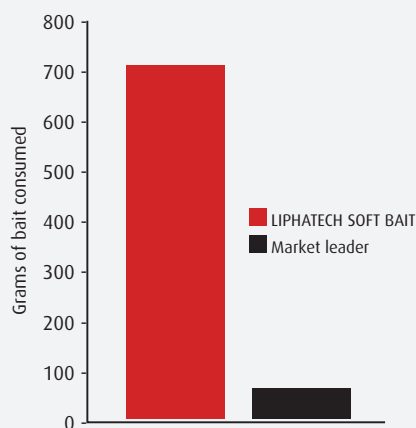
FIELD PALATABILITY TEST PROTOCOL

(test duration: 30 days)

Liphatech baits and those from a leading competitor are stacked side by side (or mounted in piles on two rods). Consumption is checked every three days to compare the palatability of the different baits.

► DID YOU KNOW?

LIPHATECH designs its protocols for palatability and efficacy tests in real-life conditions.



TEST ON NORWAY RATS
(Poultry farm - 2018)





LT[®] PROCESS, THE EFFICIENT MANUFACTURING PROCESS UNLIKE ANY OTHER ON THE MARKET!

AS THE MARKET LEADER, LIPHATECH IS COMMITTED TO OFFERING HIGH-QUALITY BAIT PRODUCTS WITH GUARANTEED **OPTIMAL EFFICACY** AND **MAXIMUM SAFETY** FOR USERS.

To fulfil this commitment, LIPHATECH continually invests in its manufacturing facilities :

- Our plant uses a high-tech industrial process that keeps us one step ahead of other market players. Today, all our cereal, soft bait and extrusion manufacturing processes are controlled by the latest generation of automated equipment. These automated systems are monitored by production operators and continuously and precisely analyse all parameters that are essential to producing consistent and high-quality bait. These tools mean that all weight, temperature and flow rate measurements are closely

tracked and recorded. High-tech equipment combined with the expertise of qualified operators who receive regular training on new industrial technologies are key aspects of our processes.

- LIPHATECH has been ISO 9001 certified since 2002, and is committed to outstanding management in order to guarantee all specifications are met throughout the manufacturing process. This starts from the receipt of raw materials to the packaging of the finished products.

- LIPHATECH'S unrivalled and protected recipes ensure the completely effective of our products. Users should know that LIPHATECH in-



A €300,000-plus investment in a cutting-edge machine that makes blocks.

vests hundreds of thousands of euros every year in its plant to produce high-quality bait, ensure faster delivery and support a culture of innovation to meet our customers' needs.

OUR APPROACH

Regulatory compliance / Social responsibility / Safety for operators and processes

AT THE PLANT		ON THE MARKET
<p>1 OUR REQUIREMENTS raw materials</p> <ul style="list-style-type: none"> RIGOUR Our raw materials specifications impose quality standards that are the same as or exceed those of the agrifood industry. SELECTION Flours and cereals are subject to calibration to automate our industrial processes; this guarantees consistent quality for all finished products. CERTIFICATION Every shipment received has an analysis certificate that is checked by Quality Control to ensure it meets all specifications. Guaranteed quality: Each year, LIPHATECH rejects on average more than one lorry of non-compliant raw materials. 	<p>2 OUR EXPERTISE manufacturing</p> <ul style="list-style-type: none"> PROTECTED RECIPES LIPHATECH product recipes each have more than 10 ingredients. They are unique and protected, making our baits inimitable. PERFORMANCE LIPHATECH's industrial technologies are automated and run continuously to obtain a consistent dose of active ingredients. The raw materials are thoroughly mixed for a final texture that is even more palatable. COMPLIANCE All our products are subject to continuous quality checks throughout manufacturing all the way to packaging to achieve exemplary final quality. 	<p>3 OUR ADDED VALUE your success</p> <ul style="list-style-type: none"> PREMIUM QUALITY Consistent, effective and regulation-compliant products. SAFE TO USE Continuous optimisation of product use safety by applicators (dust content near 0, system to secure the baits, etc.) RESULTS Optimum rodent control. Faster and easier worksite management.
<p>LIPHATECH markets effective solutions for optimal rodent control in all situations.</p>		

laurencebauzil.com

Any questions? We're here to help. Contact us! Tel.: +33 5 53 69 35 70
E-mail : contact@liphatech.fr
www.liphatech.fr