

FOR PERFORMANCE - ASK ALTROMIN



**QUALITY CONTROL
&
QUALITY MANAGEMENT**

**More than 40 years experience
in animal nutrition**

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**QUALITY CONTROL
&
QUALITY MANAGEMENT**



H.-L. Altrogge

Managing director

„Quality is when the customer comes back but not the product!“

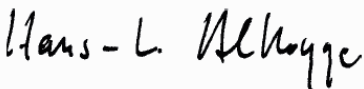
This statement describes best the basic thought which is the basis for Altromin's quality management concept. Over the last few years the overall concept of quality management in the animal feed industry changed a lot, last but not least due to many scandals in the food and animal feed sector, to mention just a few BSE, dioxin, nitrofen etc. quality control and assurance are no longer production-accompanying activities, but are in the focus of the company and have been given top priority.

Many changes in legislation, the coming into effect of the food and animal feed code, the reorganisation of the animal feed decree, etc. show the equalisation and new orientation of animal feed valuation and the direct reference to foodstuffs. Requirements of production plants such as the assurance of complete traceability, the establishment of a self-control system acc. to HACCP, the translation of requirements of GMP (Good Manufacturing Practice) and of GLP (Good Laboratory Practice) are no longer exceptions but basic requirements. Their conversion demands much know-how and discipline.

We have recognised this at an early stage and took the right way as early as in the year 1999 by building up and establishing a quality management system acc. to DIN EN ISO 9001:2000. Certification by the TÜV Rhineland was carried out in that year, too. Since that time regular control and supervision audits as well as re-certifications have taken place, in which our company was attested well functioning quality management and continuous improvements. Another audit was carried out not long ago in which they certified the complete observance by our company of all principles requested by the standards. Nevertheless a company may never rest on existing facts. Our quality management department continuously ensures further developments, adaptation and last but not least an improvement of the assurance elements used in our company.

With this system we follow the objective to satisfy our customers to a large extent, on the one hand by our high-quality standardised products, and on the other hand by our "customer service" which includes apart from customer assistance the observance of promises (delivery times, etc.), flexibility and well-founded (scientific) consulting. Customer satisfaction is given highest priority by Altromin GmbH's entrepreneurial objectives.

Yours Hans-Leopold Altrogge

A handwritten signature in black ink that reads "Hans-L. Altrogge". The signature is written in a cursive style with a clear, legible font.

"Mistakes are pure wastage, and if they are not detected the customers' expectations regarding quality will not be fulfilled" (Hirano).

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Site	Im Seelenkamp 20 D-32791 Lage (Germany)
Corporate structure	GmbH & Co. KG
Certifications/ Accreditations	DIN EN ISO 9001:2000 Accredited production plant for mixed animal feed (DE NW 100057)
Foundation	1945 Hans Altrogge 1986 Managing director: Hans-Leopold Altrogge
Variety of products	Standard diets, special diets, control and test diets, medicinal diets for biomedical research, selected products for the pet food sector
Customers	National and international scientific institutes and establishments

Altromin- Spezialfutter GmbH & Co. KG is a middle-class mixed feeding stuff manufacturer working on an international scale.

The Altromin GmbH Company's origin is in a mill which was mentioned for the first time in documents dating from the 14th century. In 1882 the Altrogge family took over the baronial mill. In 1952 Hans Altrogge founded the independent feeding stuff production sector and they started with the production of feeding stuff for productive livestock breeding and husbandry. In the middle of the Fifties the company was confronted with the difficulties of standardising the nutrition of laboratory animals. In biomedical research it had been found that the reactions of test animals were influenced by their nutrition.

Together with specialised scientists from the pharmaceutical industry and university institutes Altromin developed the first "Altromin standard diets" for laboratory animals. Comprehensive scientific essays were published in 1961 and marked the start of laboratory animal nutrition on a scientific basis. Altromin GmbH being the only specialised company of this type quickly gained the essential market share in Germany. At the beginning of the Seventies a scientific service department was established at Altromin which since that time has been engaged in the development of laboratory animal feeding stuff and is carrying out well-founded scientific consulting regarding nutrition that is appropriate to the animal species and nutrition tests at the experimenter.

Not only this consulting but also the high level of standardisation of the Altromin diets is to be considered as an animal protection measure as it reduces the number of animals to be tested.

Thanks to the many years of experience a know-how has been developed in the fields of production technology, formula structure and scientific consulting that has transformed Altromin into one of leading companies in Germany which offers products and services currently not being offered by any competitors. Today the results of Altromin's researches are used by licenced partners in different European countries for the production of Altromin articles.

Last but not least Altromin's success is due to the management's, scientists', technicians', employees', and workers' „teamwork“ as well as to the continuous contacts to partners and in the broadest sense to experiments with animals. The careful selection of the raw materials and of the suppliers, the internal entrepreneurial control system as part of the mentioned quality management which ought to be made clear with this manual ensure continuous good product quality.

Altromin GmbH has been accredited as a production company acc. to § 28, section 1, no. 2 and 3a of the FMV* and has been registered as a production company acc. to § 30, section 1, no. 2,3 and 5 of the FMV* (reg.ident.no.: DE NW 1 00057).

Altromin's membership of many years in the professional association of the feeding stuff industry and the membership in the International Research Association of Feeding Stuff Technology offer this company versatile possibilities of exchanging experience and of utilising the latest scientific and technological findings, so that our employees can be further educated based on these findings.

* FMV: Futtermittelverordnung
(German regulation concerning animal feed)

Altromin...

... a leading European company for the production of laboratory animal diets. Specialised in the development and production of standard diets and special diets as well as in the production of test diets.

... supports and advises its customers regarding the development and production of laboratory animal diets and regarding the laboratory animals' requirements for diets as well as the use of diets in experiments.

... transforms the latest scientific and technological findings in performance taking ethic principles for human beings, animals and for the environment into account.

... permanently meets the partners' requirements by best possible contacts with the customers and with customer-orientated quality, based on the observance of the principles fixed in the quality management manual acc. to DIN EN ISO 9001:2000.

... strives for turnover growth by continuous innovations as well as by the optimisation of production and of customer service. This is the precondition for the successful future as an independent company.

Our diets are more than only feeding stuff – our diets are standards.

Altromin produces

- standard feeding stuff for the breeding and husbandry of test animals (*standard diets*)
- standard diets to generate excess or deficiency symptoms (*special diets, purified diets*)
- standard diets mixed with special substances (*test diets*)

The feeding stuff of laboratory animals is an essential factor of the experiment as it influences the animals' reactions. All laboratory animals – from amphibians and rodents to primates - need special diets to ensure husbandry and nutrition which is appropriate to the species.

We have determined the laboratory animals' needs of nutritive and active substances. We attentively observe all the new findings and evaluate them to meet the nutritional and psychological requirements of the animal species involved.

The term "Altromin standard diet" stands for test animal diet

- produced as "fixed-formula-diet"
- systematically controlled as to its ingredients and relevant contaminants
- data documentation collected for many years
- fixed preset standards and revealed tolerances

Based on this "Altromin standard diet" simultaneously stands for reproducibility and comparability and consequently for GLP-conform test animal diet. The standard diets are within the tolerance limits fixed by GV-SOLAS*.

"Altromin standard diets" can be supplied:

- as pellets, as extrudates and in the form of flour
- pellets and flour specially treated (poor in germs)
- barrier-free after the disinfection of the PE-bag surface
- with additional vitamisation (fortified) – auto-clavable
- as irradiated feeding stuff
- in different packages from 1 kg to 25 kg
- in vacuum packaging from 1 kg to 25 kg
- with chemical analysis
- with microbiological test report
- with testing of each batch for undesired substances (certificate feeding stuff), at extra charge

* GV-SOLAS: Gesellschaft für Versuchstierkunde
(Association of test animal lore)

Standard diet – an unknown concept in the German feeding stuff law!

Individual and mixed feeding stuffs, standard feeding stuffs and complementary feeding stuff has been mentioned in the German feeding stuff law.

What do these concepts state? Nothing, except that you can feed animals these substances either alone or as a mixture, or that a feeding stuff as mixture can meet the animal's feeding requirements and/or that it serves only as a complement to cover certain needs.

Can these statements be satisfactory for a scientist who works with test animals?

In our opinion **THEY CANNOT!**

It is good to know that a feeding stuff can meet the animal's nutritional needs, but you can feed animals with many things. To meet the needs – the main problem of productive livestock husbandry – is a pre-condition for test animal nutrition – and the requirement for test animal feeding stuff is based on this pre-condition.

Test animal feeding stuff has the task to transform the nutrition into a negligible factor for the experiment. This can only be achieved through the uniformity of raw materials and ingredients. However, uniformity can only be measured by determining reference parameters, i.e. by fixing standards.

Over 50 years ago Altomin started to set these standards and they have them measured by everyone – therefore “standard”.

And why “diet”?

On the one hand because test zoology is an international science and because the term “diet” has been moulded in Anglo-American literature; on the other hand to make clear the distinction between ‘diet’ and ‘mixed feeding stuff’ in the productive livestock sector, as even the best productive livestock feeding stuff is unsuitable for test animals. The better it is as productive livestock feeding stuff, the more it influences the animal by the optimal utilisation of genetic performance predisposition (e.g. growth/mast).

Specially treated standard diets

Specially treated diets are produced based on a process that has been developed by Altromin; when used in SPF sectors they increase safety, at the same time saving work and energy. These diets have been used for many years in the large SPF fields.

The special Altromin process makes a germ reduction possible. This fact as well as the practical use for many years have proven the safety of the applied germ reduction process.

Below please find the advantages of the specially treated diets:

- Safety
- The findings regarding the germ content are known before infiltration into the SPF field
- The packaging with airbags ensures control over a possible contamination, as untight packaging no longer has airbags
- Work and energy savings, cost savings as the autoclaving process can be eliminated
- Reduction of friction as the pellets do not become brittle.
- Infiltration is carried out through gas chambers or dip tanks.
- The contents of nutritive and active substances are also known behind the barrier and are not changed in an uncontrolled way by autoclaving.

The conception of special diets (experimental diets)

Special and experimental diets are diets that have been composed of cleaned and/or chemically defined raw materials. The reaction of a test animal can and should be purposefully influenced with the use of special diets. For this certain ingredients are possibly added in excessive or insufficient quantities, so that reproducible disease patterns or reproducible deficiency situations can be generated with symptoms that are very similar to those of human beings. Based on their intended use the experimental diets can be subdivided into two groups:

1.) Special diets – by the wilful variation of the content of nutritive or active substances they result in findings that show the general importance of the examined ingredients for the organism or in clearly defined processes.

2.) Special diets that cause the generation of certain experimental points of departure such as arthroscleroses diets, diabetes or caries-promoting diets. They represent imitations of human beings' disease-promoting behaviour when they choose their food. Thanks to the conception and structure of the special diets Altromin is able to change the mixtures shown in the catalogue according to the customers' demands or to produce completely new formulas for other needs. In such cases we recommend that you contact our scientists to find diet-physiological and technical solutions from the start.

Due to the special production processes and with a view to the required precision for mixtures, orders for special diets can only be placed from a minimum order quantity of 10 kg.

Our special diets are carefully pelleted in a special process and can also be supplied in the form of flour. To prevent confusions, e.g. between experimental and control diets, the diets upon request are marked with food grade colours. In general these diets can be used unrestricted for up to 4 months from their production provided that they are stored under good conditions and at temperatures from +15°C to +18° C.

If storage can be at lower temperatures, e.g. refrigerator or cold storage room temperatures the storage terms are extended correspondingly.

Below please find an overview of the advantages of Altromin's special diets:

- Laboratory production in pilot plant stations that have been separated from the other production plants.
- The use of cleaned and chemically defined raw materials
- Offers the possibility of feeding the animals precisely by taking the test problems into account (if necessary we will develop a suitable special diet).
- Can be supplied in the form of flour and pelleted based on a special process
- Can be marked with food grade colours, which ensures polarisation in tests
- They guarantee what standard diets may not do:
- They purposefully influence the animal's reaction
- They contain what you define – no more and no less
- They are composed according to the customers' requests

The control diets represent a special sector of our special diets (see also special diets).

Control diets have been conceived as “module diets”, i.e. that all special diets are based on these basic formulas.

The composition of the control diets has been adapted to the nutritive needs of the species concerned.

Because of the practiced modular system control diet / special diet, the latter differs from the control diet only due to a more or less wilful variable. Substances made available by the customer are homogeneously mixed with the desired basic diet.

Altromin gives a guarantee for test and control diets

- a uniform mixing batch
- a uniform energy content
- uniform pellet hardness
- GLP-conform storage of the retention samples
- GLP-conform documentation

Test and control diets can also be supplied in the form of flour.

Quality control, quality assurance and quality management are important components of a company on the way to TQM (Total Quality Management) and are closely connected with each other. The philosophy to involve all employees, all business processes and the total production cycle into quality-related efforts is an effective approach towards Total Quality Management. TQM puts quality into the focus and by ensuring satisfied customers aims for long-term business successes and profit for the members of the organisation and for the company itself.

QUALITY CONTROL

- Final inspection
- Product orientation
- Determination of inspection requests
- Quality is a job for specialists

QUALITY ASSURANCE

- Assurance of technical processes
- Incipient process orientation
- Determination of preventive measures
- Quality is a job for specialists

QUALITY MANAGEMENT

- Control of quality in value-adding areas
- Process orientation
- Improvement of the processes
- Customer is important for the quality process
- Quality is a managerial function

Quality management defines the aspect of the total management task by which quality policy is fixed and realised, i.e. it describes the entirety of all quality-related activities and goals. The main objective of this standard is the prevention of mistakes in all phases – from design to customer service. Through a comprehensive satisfaction of the customers long-term business relationships are to be built up and maintained, therefore securing the economic stability of the company.

This standard is based on the following principles:

1. Customer orientation
2. Management
3. Involvement of the people
4. Process-orientated approach
5. System-orientated management approach
6. Continuous improvements
7. Relevant approach to make decisions
8. Supplier relations for mutual benefit.

The customers' demands and expectations increase and/or change continuously. Therefore the QM-system is also to be continuously improved and further developed, to be always able to meet the customers' requirements and expectations.

An implemented QM system does not mean that the company has definitely reached its goals.

**He who stopped to become better,
has stopped to be good!"**

The Altromin Company has got and is maintaining a quality management system based on the international standard DIN EN ISO 9001:2000. This system is applied throughout the whole company.

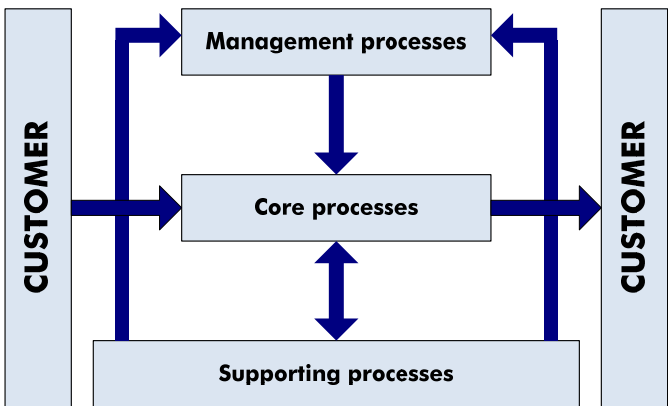
The purpose of this system is to ensure the customers' satisfaction, to reach the product quality strived for and to increase the company's efficiency and that of its processes. A process model of the company's internal activities has been developed for this which is intended to make clear the integration of the individual processes and their reciprocal interaction. This is the basis for the implementation of PDCA-circles – plan, do, check, and act.

The process is planned and/or determined before its implementation. Depending on the process, efficiency is checked either during or after its implementation. If mistakes occur or if possibilities of improvement are recognised the responsible people have to intervene in the process. Should this not be possible during the process devolution, changes to the processes must be made not later than at the next review.

The company's processes are gathered in the quality manual. These processes have been subdivided into management, core and supporting processes. Responsibilities and authorities are determined, process interfaces are shown and communication is defined. Management processes have above all controlling functions for the core and supporting processes. The tasks of these superior processes are to plan, organise, evaluate, and improve the whole quality system.

The core processes are the value creating processes of this company. They are used to produce goods or to render services that are given to the customer. They directly influence the company’s success.

Supporting processes have no direct influence on the production of goods or on rendering services. Their task is rather to ensure the organisation’s functionality. For this purpose resources are reserved, maintenance measures taken, occupational safety questions answered, and personnel development and other aspects cleared. Another task is the safe development of the core processes. Information is gathered and made available by measurements and analyses, besides others also for the management processes. Any possible deviations from the fixed values are integrated into the measures to be taken for improvements. This is where the process control circle is closed.



Version 1–3 of Altromin GmbH's quality manual has been published this year and it represents the third completely revised and adapted version. Currently the manual has over 500 pages, plus work and process instructions, production and control regulations and quality records.

The company and quality policy determined by the management forms the basis for all quality efforts.

The company's policy has been moulded by the responsibility which has accrued from the correlations:

- Feeding stuff influences the biological characteristics and the reaction of laboratory animals
- Mixed feeding stuff is a component of the upgrading chain from the raw materials to the marketable foodstuffs of animal origin
- High quality is an essential condition for competitiveness and thus for the company's economic future and for that of its employees and it results from the observance of legal feeding stuff-related regulations.

The quality-related objectives are orientated on safe findings regarding animal nutrition, feeding stuff science, technology, and legal prescriptions. They mainly focus on

- Reliability
- Sanitary and hygienic innocuousness
- Animal specific upgrading.

HYGIENE AND CLEANLINESS

Hygiene and cleanliness are very important in our sector. Our production rooms are exclusively cleaned by our own employees according to a defined cleaning schedule. The responsible persons of the individual departments ensure the correct cleaning of their sector and document all cleaning and disinfection work.

We regularly carry out (microbiological) controls to check the cleaning methods and detergents as well as our employees' work. Our employees must observe extensive hygiene prescriptions. These prescriptions exist in written form and are known to all employees. All newly engaged employees receive apart from oral instructions on hygiene and on the QM system relevant data sheets and are informed about our company's policy.

Internal and external training regarding hygiene takes place regularly. It is the managing staff's task to inform the personnel about their responsibility for the product and last but not least the customer and to remind them of this, if necessary.

WORK ENVIRONMENT

Beside our employees and our know-how our buildings and plants are our most important capital.

We sustain our own procedural department for maintenance and repairs.

We conduct our own maintenance and repair schedule to avoid any possible mistakes or defects or to identify them at an early stage.

The work environment must be designed in a way to ensure that hygienic working without any cross contamination risk for the product as well as safe working for our employees is possible without problems. The appropriate cleaning of floors, walls, plants, parts of plants, etc. must also be possible without problems.

The relevant prescriptions for occupational safety have been taken into account. Proper ventilation and aeration as well as sufficient lighting have been ensured.

PERSONNEL

All of our employees have undergone a qualified vocational education and have been extensively trained for their activities. Our company continuously makes available apprenticeship training positions. Apart from industrial businessmen we train specialists for food technology that are taken over into our company after their successful training if we need them. By this we ensure that our personnel is familiar with all entrepreneurial activities and understand Altromin's quality policy at an early stage.

PEST CONTROL

Pests should not be given any chance in companies of the feeding stuff industry. Not only do they contaminate and destroy raw material, but they can also introduce dangerous pathogenic germs. Therefore they are absolutely unacceptable. For safety reasons we have fallen back on the services of an external accredited pest control company which has been contracted with the control and the preventive fighting of pests. Their employees have been allowed access to all rooms and ensure proper pest control within the scope of a maintenance order. Beside detailed site plans for bait traps, service protocols and evaluations of the taken measures have been made available to us.

Beside this we carry out daily internal routine controls to be able to immediately react to any possible infestations.

TRAINING MEASURES

Training and further education is necessary and is carried out according to a special yearly training schedule. Beside further education on congresses, conferences and trade fairs we carry out training in the quality management field, production-relevant further education and training in the field of occupational safety and employment protection. The measures are scheduled in a way that all of our employees can participate.

INTERNAL AUDITS

Internal audits ensure the function of the QM system as in the production, logistics and administration sector we control whether all the instructions are observed and whether legal prescriptions are observed by the management. Internal audits are carried out by the quality manager in cooperation with the management. Testing traceability is also part of internal audits. On the other hand the management assesses the QM system within the scope of so-called management reviews particularly taking into account customer complaints and any deviations.

The management's weekly discussions under the managing director's chairmanship are important components of this system.

QUALITY PLANNING

The quality manager monitors all observed deviations and, if necessary, takes corrective measures. All the deviations are documented by the responsible person to ensure that decisions made can remain reconstructable! The quality manager regularly submits deviation reports and/or proposals for improvements to the management.

DOCUMENT CONTROL

All quality-relevant documents are subject to fixed control rules such as the quality manual, forms, all quality records (hygiene protocols, etc.), process and work instructions, product specifications, etc. access to these documents is given via the Intranet thus ensuring easy and efficient version management. Electronically stored documents and records are regularly saved. The quality manager is responsible for the creation, publication and exchange of documents and records.

The authorisation is incumbent on the management. All quality-relevant records are, in principal, retained for 10 years after their creation. All other documents are to be stored for 6 years. Commercial documents and personnel documents are retained for the legally fixed 30-year term.

MARKING

The scientific department is responsible for the legal marking and declaration of our products. Label production and release is carried out by our scientific employees. The quality manager controls if all markings on site are properly carried out.

TRACEABILITY

We rely on an EDP-supported merchandise planning and control system to ensure the easy traceability of our many products. When raw materials are received (not only silo goods but also goods in bags) they are marked with an internal batch number. Storage is carried out strictly according to the FIFO rules (First-In First-Out).

The batch numbers are absolutely allocated to a defined delivery and accompany the product in all production processes. This data is stored in the EDP mixing instructions and is filed for 10 years. All the products that leave our company are marked with a batch number which shows the use-by date (expiration date) and the time of the production process. A complete marking is provided so that we are able to identify every single added and mixed component even after many years.

RETENTION SAMPLES

A representative sample is taken from each produced batch and from each raw material and is then packed, marked and stored in our retention sample room for 12 months from the production date. This ensures that the product is available in our company for up to 3 months succeeding the expiration date. Retention samples are stored in a way to minimize any possible risk of chemical, physical or (micro-) biological impairment or change.

QUALITY CONTROL

Our products are regularly examined from the chemical and physical as well as from the microbiological point of view (Weender analysis and harmful substances analysis). For this purpose we send samples to specialised accredited test laboratories. Beside routine controls batch-based examinations are carried out upon request. Depending on the agreed test goal our customers receive a test report by mail, fax or e-mail. Furthermore we carry out and document internal sensory controls. Beside the gustatory and olfactory test of the finished products by trained personnel all incoming raw materials are subject to a visual control. For irradiated products the customer receives an irradiation certificate.

MEASURING DEVICES

It goes without saying that all the measuring instruments (scales, etc.) that we use are subject to regular and documented test equipment supervisions. Where possible, we calibrate or test ourselves, for other cases we have concluded relevant maintenance agreements. All the scales placed at the interfaces where they are put into circulation (i.e. from the supplier to the customer) have been officially calibrated.

Flexibility is our strength...

PACKAGING AND STORAGE

Most of our goods are produced based on incoming orders, stock keeping has been minimised. The storage of raw materials, semi-finished products and finished products is carried out in accordance with the product type. (Silo, products in bags, etc.). In principle, every product is packaged. Beside bags (several bag sizes are available) sterile packaging in protective PE film and/or double vacuum packaging is possible.

Depending on the packaging a subsequent autoclaving or irradiation process is possible.

TRANSPORT

When the commissioning process has been finished and the goods have been released a carrier is charged with the transport to the customer. Generally delivery is made on EURO pallets. Smaller deliveries or especially produced goods are dispatched by parcel.

PRODUCT DEVELOPMENT

Ideas for new products do not develop on regulations. The proposals do not only come from the customer but also from ourselves. Our “Scientific Service” department has continuous close contacts to the customers and develops new diets together with scientists and users. We have a system that helps to assess product-related proposals and to create marketable products. New products are introduced after extensive tests and after release has been authorised by the managing director.

Every product development is accompanied by extensive retraceable documentations.

CRISIS MANAGEMENT

Altromin has extensive verified mechanisms for dealing with complaints, for any possible product recalls or for emergency cases. In every case we can ensure that customer complaints etc. are efficiently handled immediately after their notification.

We can completely retrace faulty goods within a very short time, not only within our organisation but also up to the customer or supplier. Communication with the customers involved has already been regulated and can be realised very quickly. Any relevant recalls are made immediately, necessary analyses can be ordered in the short term. Furthermore an emergency plan is available which contains countermeasures and work schedules for Acts of God such as damage caused by storm, water and fire, but suitable measures are also described for accidents caused by chemicals, etc.

FORMULAS

Formulas are the core piece of every feeding stuff production plant. Formulas must be clearly specified for constant quality standards and information given on ingredients and allergies. This also applies to adjuvants and additives that are to be made available by the supplier. The finished product must also be clearly specified to guarantee constant quality. The latest version of formulas, manufacturer's instructions and work instructions is made available to every employee so that he or she can do his or her job properly.

RESPONSIBILITY

Responsibilities and authorisations have been clearly defined in the quality manual in the form of a responsibility matrix and an organigram. Responsibilities can only be determined by the managing director. The tasks taken over within the scope of given authorisations have been clearly defined within the scope of job descriptions.

SUPPLIERS

We buy raw materials and semi-finished materials exclusively from efficient suppliers with whom we have had successful business relations for many years. We evaluate our suppliers within the scope of specifications, external audits and regular controls, e.g. raw material analyses, etc. and by this we can recognize any deviations quickly and reliably.

HACCP (Hazard Analysis Critical Control Points) which is known in the food sector where it has been part of usual practice for a long time, has now become a MUST also for feeding stuff production companies. Such a concept was worked out by Altromin within the scope of a product and process-specific risk analysis as early as 2004 and it had been established in this company step by step.

A HACCP concept shows a systematic way to the assurance, observance and possibility of controlling foodstuff and feeding stuff safety. This process does no longer mean a mere final control of the product but includes steps of manageable, retraceable process control. This change towards preventive measures means completely new tasks for the companies concerned. These tasks are precisely fixed by the food hygiene decree as well as by the 'Codex Alimentarius Commission' of the FAO / WHO. The foodstuff and feeding stuff act of the Federal Republic of Germany demands accredited producers to introduce internal measures and controls to prevent the generation of health risks through biological, chemical or physical factors.

In addition to the actual establishment of the HACCP concept it has been proven to be useful to create a manual as a kind of guide, in which all measures for the implementation can be reconstructed. This manual contains beside documentations, manufacturers' descriptions and risk analysis based on the latter also relevant legal provisions and/or refers to the latter.

It makes a transparent statement of the developed system to the governmental supervisory authorities possible.

The identification and supervision of so-called CCPs (critical control points) offers the possibility of eliminating the recognised risks at an early stage, i.e. to ensure by proper supervision and assurance measures that the production phase and/or – last but not least – the product itself can be dominated when it has passed the critical point.

GMP – Good Manufacturing Practice – is considered as the original concept of the pharmaceutical industry. It is difficult to imagine how such high demands regarding production safety and standardisation can be fitted into a feeding stuff production company. If one considers the production of antibiotics or other medication used by human beings the risk of faulty productions is by far higher than it could be in the production of feeding stuffs. Yes and no... Firstly, we have to distinguish between (pharmaceutical) GMP and GMP+.

The GMP+ system has been established by the ‚Marktverband Tierfutter‘ (Feeding Stuff Market Association) (pdv) from the Netherlands, however, within the last years it became accepted also outside the Netherlands. This system is based on the principle of integral chain domination and includes all the links of the feeding stuff chain, whereas each of the links must be certified. This system guarantees the foodstuff and feeding stuff quality for human beings’ and animals’ health and for the environment.

The GMP system distinguishes itself by the following:

- Demands of the internal quality management system (based on DIN EN ISO 9001:2000)
- Application of the HACCP principles to ensure safety
- Generic control conditions and measures in the production process including traceability and recall

- Ensuring the application of the legal and non legal product standards that have been agreed with the groups involved in the manufacturer chain
- Prescribed minimum control terms (including monitoring).

The goal of the GMP concept is to establish a uniform standard regarding production and quality control. The measures of GMP include all the rules regarding due diligence according to the applicable law. This means – beside the translation of suitable hygiene principles – the application and control of processes that ensure the conformity of finished products through claimed specifications and thus maximise product safety. Requirements and recommendations regarding the guidelines of Good Manufacturing Practice were worked out and established in the form of a new chapter for the quality manual in 2006 (production of diets with pharmaceutical substances).



CERTIFICATE

The TÜV CERT Certification Body
of TÜV Industrie Service GmbH
TÜV Rheinland Group

certifies in accordance with
TÜV CERT procedures that



**altromin Gesellschaft für
Tierernährung mbH**

Lange Straße 42
D - 32791 Lage

has established and applies a quality management system for
Development, production and distribution of animal diets

An audit was performed, Report No. **059936**.
Proof has been furnished that the requirements according to

DIN EN ISO 9001:2000

are fulfilled.

The certificate is valid until **2008-05-01**.

Certificate Registration No. **01 100 059936**



Species	RATS AND MICE				RABBITS				GUINEA PIGS				
	b	m	m	nude	b	m	b	m	b	m	b	m	b/m
Breeding (b) or maintenance (m)													
Type of diet													
Available as													
Powder	1310	1320	1340	1430	2010	2020	2110	2120	2420	3010	3020	3110	3120
3,0 mm	1311	1321	1341	1431	2011	2021	2111	2121	2421	3011	3021	3111	3121
4,5 mm	-	-	-	-	-	-	-	-	-	-	-	-	-
10,0 mm	1314	1324	1344	1434	2013	2023	2113	2123	2423	3012	3022	3112	3122
13,0 mm	1316	1326	1346	1436	-	-	-	-	-	-	-	-	-
Extrudat	1319	1329	-	1439	-	-	-	-	-	-	-	-	-
Nutrients – average % content													
Crude protein	22,50	19,00	12,50	23,50	22,50	17,50	15,00	12,00	12,00	23,00	18,00	15,50	14,00
Crude fat	5,00	4,00	3,00	7,50	5,00	4,00	3,50	3,00	2,40	5,00	4,30	4,00	4,00
Crude fiber	4,50	6,00	20,00	3,50	13,00	14,50	19,50	20,00	26,50	12,00	14,50	19,50	19,50
Ash	6,50	7,00	6,50	6,50	8,50	9,00	8,00	9,00	8,00	8,50	8,50	8,00	9,00
Moisture	13,50	13,50	11,30	13,50	12,00	12,00	12,50	12,00	11,30	12,00	12,00	12,00	12,00
N ₂ -free extracts (NFE)	48,00	50,50	46,70	45,50	39,00	43,00	42,00	44,00	39,80	39,50	42,70	41,00	41,50
Metabolizable Energy (MJ/kg)													
Amino acids – average % content													
Lysine	1,20	0,90	0,60	1,30	1,20	0,80	0,70	0,50	0,60	1,30	0,90	0,80	0,65
Methionine	0,40	0,30	0,25	0,40	0,40	0,35	0,30	0,25	0,25	0,40	0,35	0,30	0,25
Cystine	0,30	0,30	0,18	0,30	0,30	0,25	0,20	0,20	0,20	0,30	0,25	0,20	0,20
Threonine	0,80	0,60	0,55	0,80	0,80	0,60	0,60	0,50	0,55	0,90	0,70	0,60	0,70
Vitamins – additive in 1 kg diet													
Vitamin A IE	15,000	15,000	15,000	25,000	15,000	15,000	12,000	12,000	15,000	15,000	15,000	16,000	16,000
Vitamin D3 IE	600	600	600	1,000	600	600	480	480	600	600	600	650	650
Vitamin E mg	75	75	75	125	75	75	60	60	75	75	75	80	80
Minerals – average % content													
Calcium	0,90	0,90	0,90	0,80	0,95	0,95	0,80	0,80	1,20	0,95	0,90	0,80	0,85
Phosphorus	0,70	0,70	0,60	0,60	0,75	0,70	0,60	0,60	0,75	0,75	0,70	0,60	0,65
Magnesium	0,20	0,20	0,30	0,20	0,20	0,20	0,30	0,30	0,30	0,20	0,20	0,30	0,20
Sodium	0,20	0,20	0,20	0,20	0,20	0,20	0,30	0,30	0,25	0,20	0,20	0,30	0,20
Potassium	1,00	1,00	1,00	0,90	1,60	1,60	1,60	1,50	1,50	1,50	1,50	1,60	1,60
Trace elements – average mg content in 1 kg diet													
Manganese	45	75	110	35	50	60	95	100	100	55	62	90	95
Iron	160	180	200	150	160	160	200	200	250	175	165	200	200
Copper	13	13	13	13	17	17	14	13	14	18	16	14	14
Zinc	60	70	70	50	50	50	55	60	45	50	50	55	55

For further information please contact our team.

We are interested in hearing your comments, questions, and suggestions about Altromin.

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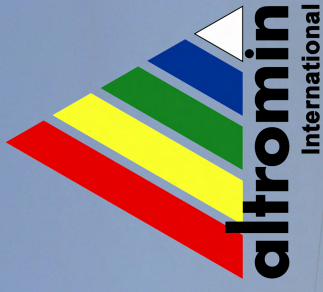
Monday - Thursday 07:30 a.m. - 05:00 p.m.

Friday 07:30 a.m. - 02:00 p.m.

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