

# Fibrous feed (sources)



## Acceptance Guidelines for Raw Materials in a Feed Factory



# Dehydrated alfalfa

## General description

The dehydrated aerial part of alfalfa (*Medicago sativa L.*) used in monogastric feed

**Other names:** Alfalfa, lucerne.

## General aspect

Dehydrated alfalfa is green in colour. The commercial product presents a characteristic forage smell and is sold as pellet. It should be well dried and clean, without contaminations and adulterations with other forages.

## Observation

*Dehydrated alfalfa requires systematic analytical control in the feed factory due to the high variability between batches, which mainly depends on the quality of the initial raw material, harvesting, preservation, and storage conditions. In pellet form, it is hard to verify to verify the quality of the final product and detect possible contaminations and adulterations with other forages, agricultural by-products, soil, sand, or metal objects. If alfalfa is grown in a traditional way, the second cut is preferred as it is of higher quality and less contaminated with other forages. Adulteration with non-protein nitrogen (urea, ammonium salts, and poultry manure) have been reported in some cases in an attempt to artificially increase protein content. Sometimes is possible to find adulteration with calcium carbonate or with other fibrous material such as corn stalk, olive, leaves, marc, carob pods, etc. As such, when the value of crude fibre is higher than expected. When the ash value is higher than normal, an additional analysis of HCL insoluble ash is necessary to check for contamination with soil or calcium carbonate. Colour intensity of alfalfa pellets vary relative to their freshness. B-carotenes and Xanthophyl concentrations may serve as an indicator of the quality of the production and preservation processes. In the feed factory, dehydrated alfalfa is easy to store. Agglomerate is recommended to increase pellet durability for feed with a high level of alfalfa inclusion.*

## General controls and acceptance requirements

Parameter to analyse	When	Parameter to analyse	Values		
			Normal	Reclaims	Decline
Humidity (%)	Before Unloading	Basic	<10		>13
Colour			Intense green		
Foreign material			Absence		Presence
Impurity			Absence		Presence
Temperature <sup>1</sup> (°C)					>10
Protein (%)			15	1.5 point < contract	<13
Fibre (%)		<27		>30	
Ash (%)		8		>12	
Insoluble ash (%)		<3	Extended		
Aflatoxin levels (ppm)		<5			>20
Carotenes (ppm)	>100			<80	

<sup>1</sup>respect environmental temperature