

TECHINICAL REPORT

Report code: AC15-0117

To: MCDP srl

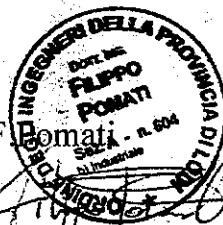
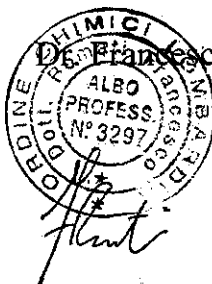
Ammonia scavenger test

Report Title: Ammonia scavenger effect of sprayed surfactant mixture. Preliminary test.

Author(s): Dr. F. Pomati,

Responsible for Quality: Eng. Materials F. Pomati

Responsible laboratory: Dr. Francesco Pomati



Date: 11/03/2015

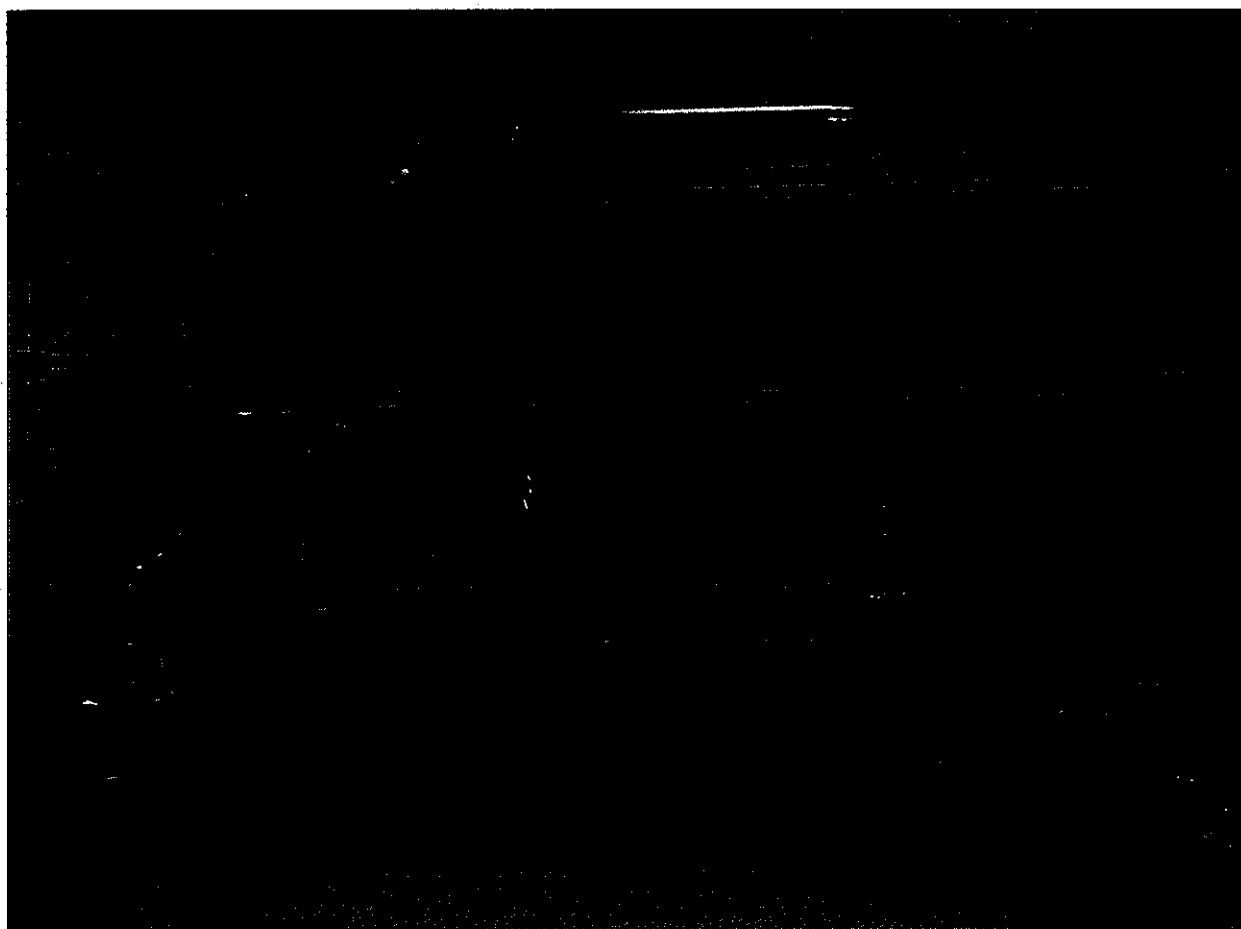
1 SCOPE

The aim of the work is to test the capability of a surfactant mixture to remove ammonia from the atmosphere. The experiment is simple and preliminary. It does not take in account spraying efficiency and product mixing time

2. EXPERIMENT DESCRIPTION

A spraying chamber has been built up from normal laboratory glassware as in Fig 1.

FIG. 1



The bottle on the left is 25% ammonia. On the right there are the sulphuric acid trap connected to the air sampling pump. A Claisen adaptor connected to a flash chromatography column allows to introduce a sprayer and the gaseous ammonia. The flash chromatography columns, 40 cm long and 10 cm wide, acts as mixing chamber. Ammonia is passively sampled by the air pump from the lower Claisen port in the picture. Ammonia trapped by sulphuric acid is measured by colorimetric method.

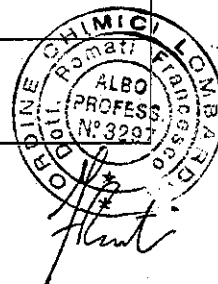
CONCLUSION

The total concentration of ammonia, spraying only water, is set to 100%. The efficiency in lowering ammonia level have been reported in the document AC15-0117.

The water surface tension changes along with the surfactant concentration effecting spraying efficiency.

For this reason the product power to wipe away ammonia from atmosphere might be optimized changing the spraying condition.

ANALYST
Dr. Francesco Pomati



*I risultati ottenuti nel presente rapporto si riferiscono esclusivamente al campione sottoposto ad analisi
Il Presente Rapporto di Prova può essere riprodotto solo per intero; la riproduzione parziale deve essere autorizzata da Arschemica S.r.l. tramite
un documento scritto*

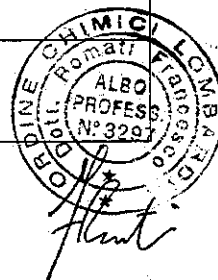
ARSCHEMICA S.r.l. Analisi Ricerca e Sviluppo Chimico; via Pascoli 5 26845 Codogno (Lodi)
 Laboratorio: via Cesare Battisti s.n.c. 26842 Caselle Landi (Lodi)
 Tel/fax 0377-69497 cell. 349-3102784 349-7131843 web: www.arschemica.com e-mail: info@arschemica.com

Rapporto numero: AC15-0117

Analysis: Ammonia scavenger efficiency test
Client: MPCD srl
Sampling place: NA
Sampling: Customer
End of analysis: 11/03/2015
Sample ID: Unknown (Signorelli)

Sample dilution	HAU	Residual ammonia
Water	%	100
5%	%	80
25%	%	42
50%	%	36

ANALYST
Dr. Francesco Pomati



*I risultati ottenuti nel presente rapporto si riferiscono esclusivamente al campione sottoposto ad analisi
 Il Presente Rapporto di Prova può essere riprodotto solo per intero; la riproduzione parziale deve essere autorizzata da Arschemica S.r.l. tramite
 un documento scritto*