



长春大合生物技术开发有限公司

Changchun Dahe Bio Technology Development Co.,Ltd

886 Xihuan Road,, Changchun,Jilin, China 130062

Tel: +86 431 8787 9541 Fax:+86 431 8678 3070

Certificate of Analysis

PRODUCT NAME: L-LYSINE HCL 98.5% (FEED GRADE)

PRODUCTION DATE: Aug 28, 2016

BATCH NO.: DH16082901

SAMPLE DATE: Aug 28, 2016

TEST DATE: Aug 29, 2016

QUANTITY: 2MT

EXPIRY DAT Aug 27, 2018

INVOICE NUMBER: 0922-32108

Test Items	Specification	Test Result
Appearance	White or light brown powder	White or light brown powder
L-lysine HCL Content (as dry basis)	$\geq 98.5\%$	98.5%
Optical rotation $[\alpha]_D^{20}$	+18.0°- +21.5°	18.7°
Loss on drying	$\leq 1.0\%$	0.21%
Residue on ignition	$\leq 0.3\%$	0.08%
Ammonium salt (as NH ₄ ⁺)	$\leq 0.04\%$	<0.04%
Heavy metal (as Pb),mg/kg	≤ 30	<30
Arsenic (as As) ,mg/kg	≤ 2	<2

CONCLUSION: THIS BATCH IS CONFORMING WITH THE STANDARD OF NY/39-1987

ISSUE DATE: 2016-9-22

TEST BY: Ding Lili REVIEW BY: Zhang Xiaohui APPROVED BY : Yan Bian
L/C NUMBER 202116010239,LCAF NO.06964,IRC NO.BA-148372,TIN
NO:371771440067,VAT REG.NO:18151041772,ISSUING BANK'S BIN NO.19071026638
AND H.S CODE NO.2922.41.00





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Certificate of Analysis

PRODUCT NAME: L-LYSINE HCL 98.5% (FEED GRADE)

PRODUCTION DATE: Aug 2, 2016

BATCH NO.: DH16080303

SAMPLE DATE: Aug 2, 2016

TEST DATE: Aug 3, 2016

QUANTITY: 0.25MT

EXPIRY DATE: Aug 1, 2018

INVOICE NUMBER: 0922-32108

Test Items	Specification	Test Result
Appearance	White or light brown powder	White or light brown powder
L-lysine HCL Content (as dry basis)	$\geq 98.5\%$	98.5%
Optical rotation $[\alpha]_D^{20}$	+18.0°- +21.5°	18.7°
Loss on drying	$\leq 1.0\%$	0.08%
Residue on ignition	$\leq 0.3\%$	0.16%
Ammonium salt (as NH_4^+)	$\leq 0.04\%$	<0.04%
Heavy metal (as Pb), mg/kg	≤ 30	<30
Arsenic (as As), mg/kg	≤ 2	<2

CONCLUSION: THIS BATCH IS CONFORMING WITH THE STANDARD OF NY/39-1987

ISSUE DATE: 2016-9-22

TEST BY: Ding Lili REVIEW BY: Zhang Xiaohui APPROVED BY: Yan Bian
L/C NUMBER 202116010239, LCAF NO.06964, IRC NO.BA-148372, TIN
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Certificate of Analysis

PRODUCT NAME: L-LYSINE HCL 98.5% (FEED GRADE)

PRODUCTION DATE: Jul 30, 2016

BATCH NO.: DH16083103

SAMPLE DATE: Jul 30, 2016

TEST DATE: Aug 31, 2016

QUANTITY: 15.75MT

EXPIRY DAT Jul 29, 2018

INVOICE NUMBER: 0922-32108

Test Items	Specification	Test Result
Appearance	White or light brown powder	White or light brown powder
L-lysine HCL Content (as dry basis)	$\geq 98.5\%$	98.5%
Optical rotation $[\alpha]_D^{20}$	+18.0°- +21.5°	18.7°
Loss on drying	$\leq 1.0\%$	0.34%
Residue on ignition	$\leq 0.3\%$	0.08%
Ammonium salt (as NH_4^+)	$\leq 0.04\%$	<0.04%
Heavy metal (as Pb),mg/kg	≤ 30	<30
Arsenic (as As) ,mg/kg	≤ 2	<2
CONCLUSION: THIS BATCH IS CONFORMING WITH THE STANDARD OF NY/39-1987		

ISSUE DATE: 2016-9-22

TEST BY: Ding Lili REVIEW BY: Zhang Xiaohui APPROVED BY: Yan Bian

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