Labo	oratory		chnology Centre, No. 3, 1 <sup>st</sup> se, Bangalore, Karnataka	Main Ro	oad, Peenya
Асси	reditation Standard	ISO/IEC 17025: 2005			
Disc	ipline	Chemical Testing	Issu	ue Date	08.03.2014
Cert	ificate Number	T-0822	Val	id Until	07.03.2016
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed		ige of Testing / its of Detection
I.	FOOD & AGRICULT	URAL PRODUCTS			
1.	TOBACCO AND BY-	PRODUCTS			
a.	Cigarette Smoke	pH	Health Canada – Method, T-113	3 4.00	to 9.00
		Total and nicotine free dry particulate matter	ISO 4387:2000 /Amd 1:2008	0.5 t	to 30.0/0.1 mg/cig
		Carbon Monoxide	ISO 8454:2007/Amd1:2009	0.5 t	to 30/0.1 mg/cig
		Nicotine	ISO 10315:2000/Amd1:2011	0.05	to 4.0/0.02 mg/cig
		Phenols	In-house method,		
		Catechol	TTP/VAL/HA 41-12, Issue No. 00, Revision No. 01,	0.4 t	to 100 / 0.13 µg/cig
		Phenol	Dated : 1 <sup>st</sup> Oct. 2013	1 to	200 / 0.04 µg/cig

m and p –Cresol

O-Cresol

Ammonia	In-house method, TTP/VAL/HA 44-12 Issue No. 01, Revision No. 01, Dated : 2 <sup>nd</sup> April 2013	1.2 to 66/0.6 μg/cig
<b>Tobacco specific Nitosoamines</b> ( <b>TSNAs</b> ) N-Nitroso Nornicotine [ NNN ]	In-house method, TTP/VAL/HA 46-12 Issue No. 01, Revision No. 01,	4 to 500/0.6 ng/cig
N-Nitroso Anatabine [ NAT ]	Dated : 1 <sup>st</sup> Aug. 2012	4 to 500/0.6 ng/cig
N-Nitroso Anabasine [NAB]		1 to 500/0.6 ng/cig

0.3 to 70 / 0.03  $\mu g/cig$ 

0.2 to 40/0.02 µg/cig

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Accreditation Standard	ISO/IEC 17025: 2005			
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Certificate Number	T-0822	١	Valid Until	07.03.2016
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S.No. Product / Material of Test	Specific Test Performed	Test Method Specificati against which tests are performed		nge of Testing / nits of Detection
Cigarette Smoke	4-(Methylnitrosamino)-1- (3-pyridyl)-1-butanol [NNK]	In-house method, TTP/VAL/HA 46-12 Issue No. 01, Revision No. Dated : 1 <sup>st</sup> Aug. 2012		o 500/0.6 ng/cig
	Carbonyls	Health Canada method T -	104	
	Formaldehyde		12	to 60/11 ng/cig
	Acetaldehyde		205	5 to 950/200 ng/cig
	Acetone		88	to 450/85 ng/cig
	Acrolein		20	to 90/20 ng/cig
	Propionaldehyde		18	to 90/15 ng/cig
	Crotonaldehyde		12	to 50/11 ng/cig
	Methyl ethyl Ketone		30	to 80/29 ng/cig
	Butyraldehyde		14	to 70/13 ng/cig
	Hydrogen Cyanide	Health Canada method T -	107 14	to 210/0.504 ng/cig
	Heterocyclic Amines and Tobacco specific nitrosamines	In-house method TTP/VAL/HPHC/2-12		
	A-Alpha-C. 2-Amino-9H- Pyrido[2,3-]indole)	Issue No. 01, Revision No. Dated: 10 <sup>th</sup> Oct. 2012	01, 2 to	o 500 / 0.04 ng/cig
	Glu-P1. 2- Amino-6- methyldipyrido [1,2-a:3'2'-d]imidazole		2 to	o 500 / 0.04 ng/cig
	Glu-P2.2-Aminodipyrido [1,2-a:3'2'- d]imidazole		2 to	o 500 / 0.04 ng/cig

Laboratory	ITC Life Sciences & Tech Industrial Area, 1 <sup>st</sup> Phase	nology Centre, No. 3 e, Bangalore, Karnata	, 1 <sup>st</sup> Main ka	Road, Peenya
Accreditation Standard	ISO/IEC 17025: 2005			
Discipline	Chemical Testing		Issue Da	nte 08.03.2014
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S.No. Product / Material of Test	Specific Test Performed	Test Method Specifica against which tests ar performed		Range of Testing / Limits of Detection
Cigarette Smoke	IQ. 2-Amino-3- methylimidazo[4,5-f]quinolone	In-house method TTP/VAL/HPHC/2-12		2 to 500 / 0.04 ng/cig
	MeA-Alpha-C. 2-Amino-3- methyl)-9-H-Pyrido[2,3-b]indole	Issue No. 01, Revision No Dated: 10 <sup>th</sup> Oct. 2012	). 01,	2 to 500 / 0.04 ng/cig
	PhIP. 2-Amino-1-methyl-6- phenylimidazo[4,5-b]pyridine		2	2 to 500 / 0.04 ng/cig
	Trp-P1. 3-Amino-1,4-dimethyl- 5H-Pyrido[4,3-b]indole			2 to 500 / 0.04 ng/cig
	Trp-P2. 1-Methyl-3-Amino-5H- Pyrido[4,3-b]indole			2 to 500 / 0.04 ng/cig
	NNK. 4-methylnitrosoamino) 1-(3-pyridyl)-1-butanone)		2	2 to 500 / 0.04 ng/cig
	NNN. N-Nitrosonornicotine			2 to 500 / 0.04 ng/cig
	Hydrazine	In-house method TTP/VAL/HPHC/2-12 Issue No. 00, Revision No Dated: 12 <sup>th</sup> Feb. 2013		0.025 to 10 / 0.02 µg/cig
	Volatiles and Semi volatiles -1	In-house method TTP/VAL/HPHC/4-13		
	Propylene Oxide	Issue No. 01, Revision No.	o. 00, (	0.9 to 40/0.1 µg/cig
	Vinyl Chloride	Dated: 18 <sup>th</sup> Mar. 2013	(	0.4 to 20/0.1 μg/cig
	1,3-Butadiene		9	9.5 to 400/0.1 µg/cig
	Acrylonitrile		2	2.0 to 100/0.1 µg/cig
	Vinyl Acetate		(	0.5 to 20/0.1 µg/cig
	Benzene		,	7.6 to 320/0.1 µg/cig

Laboratory	ITC Life Sciences & Technology Centre, No. Industrial Area, 1 <sup>st</sup> Phase, Bangalore, Karnat	3, 1 <sup>st</sup> Main Ro aka	oad, Peenya
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	Cigarette Smoke	Toluene	In-house method	8.5 to 320/0.1 µg/cig
		Ethyl Benzene	TTP/VAL/HPHC/4-13 Issue No. 01, Revision No. 00,	1.0 to 40/0.1 µg/cig
		Styrene	Dated: 18 <sup>th</sup> Mar. 2013	0.9 to 40/0.1 µg/cig
		Quinoline		0.8 to 20/0.1 µg/cig
		Ethylene Oxide		10.9 to 400/3.0 µg/cig
		Isoprene		83.5 to 3200/0.1 µg/cig
		Ethyl carbamate	In-house method TTP/VAL/HPHC/9-13 Issue No. 01, Revision No. 01, Dated: 15 <sup>th</sup> Feb. 2013	40 to 800 / 20.0 µg/cig
		Polycyclic aromatic hydrocarbons (PAH)	In-house method TTP/VAL/HPHC/1-13	
		Benzofuran	Issue No. 01, Revision No. 01, Dated: 15 <sup>th</sup> Feb. 2013	1.0 to 200 /0.5 ng/cig
		Benzo ( c ) phenanthrene		1.0 to 200 /0.5 ng/cig
		5-Methyl chrysene		1.0 to 200 /0.5 ng/cig
		Benz (a) anthracene		1.0 to 200 /0.5 ng/cig
		Cyclopenta (c,d) pyrene		1.0 to 200 /0.5 ng/cig
		Chyrsene		1.0 to 200 /0.5 ng/cig
		Benzo (b) fluoranthene		1.0 to 200 /0.5 ng/cig
		Benzo (k) fluroranthene		1.0 to 200 /0.5 ng/cig
		Benzo (j) aceanthrylene		1.0 to 200 /0.5 ng/cig
		Benzo (a) pyrene		1.0 to 200 /0.5 ng/cig

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	oduct / aterial of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Ciga	arette Smoke	Dibenz (a,h) anthracene	In-house method	1.0 to 200 /0.5 ng/cig
		Indeno (1,2,3-cd) pyrene	TTP/VAL/HPHC/1-13 Issue No. 01, Revision No. 01, Dated: 15 <sup>th</sup> Feb. 2013	1.0 to 200 /0.5 ng/cig
		Dibenzo (a,l) pyrene	In-house method	5.0 to 200 /2.50 ng/cig
		Dibenzo (a,e) pyrene	TTP/VAL/HPHC/11-13 Issue No. 01, Revision No. 01,	5.0 to 200 /2.50 ng/cig
		Dibenzo (a,i) pyrene	Dated: 4 <sup>th</sup> April 2013	5.0 to 200 /2.50 ng/cig
		Dibenzo (a,h) pyrene		5.0 to 200 /2.50 ng/cig
		Naphthalene		5.0 to 2000 /2.50 ng/cig
		Caffeic Acid		0.05 to 100 / 0.01 ng/ci
		<b>Volatiles/Semi volatiles -2</b> Furan 2-Nitropropane Nitro methane Nitrobenzene Acetamide Acrylamide Quinoline Benzofuran	In-house method TTTP/VAL/HPHC/18-13 Issue No. 01, Revision No. 00, Dated: 7 <sup>th</sup> Nov. 2013	3.0 - 60 /0.1 μg/cig 0.2 - 40 /0.1 μg/cig 0.3 - 40 /0.1 μg/cig 0.2 - 40 /0.1 μg/cig 0.4 - 20 /0.1 μg/cig 0.2 - 20 /0.1 μg/cig 0.2 - 20 /0.1 μg/cig 0.5 - 48/0.03 μg/cig
		Volatile Nitrosamines N-Nitrosodiethanolamine N-Nitrosopiperidine N-Nitrosopyrolidine O-Toluidine O-Anisidine Acrylamide 2,6,Dimethyl aniline	In-house method TTP/VAL/HPHC/16-13 Issue No. 01, Revision No. 01, Dated: 29 <sup>th</sup> July 2013	10-100/0.25 ng/cig 10-100/0.21 ng/cig 10-100/0.23 ng/cig 1-100/0.05 ng/cig 1-100/0.04 ng/cig 1-5/0.002 ng/cig 1-100/0.16 ng/cig

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S.No. Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed		ge of Testing / its of Detection
Cigarette Smoke	N-Nitrosodimethylamine N-Nitrosodiethylamine N-Nitrosoethylmethylamine	In-house method TTP/VAL/HPHC/16-13 Issue No. 01, Revision No. 01, Dated: 29 <sup>th</sup> July 2013	1-10	0/0.5 ng/cig 0/0.4 ng/cig 00/0.04 ng/cig
	Aromatic Amines 1-Aminonapthalene 2-Aminonapthalene 4-Aminobiphenyl Metals Beryllium Chromium Cobalt	In-house method, TTP/VAL/HPHC/21-13 Issue No. 01, Revision No. 01, Dated: 9 <sup>th</sup> Oct 2013 In- house method TTP/VAL/HPHC/17-13 Issue No. 00, Revision No. 00, Dated: 14 <sup>th</sup> Aug 2013	1-80 0.2- 2 - 2	/0.02 ng/cig /0.01 ng/cig 16/0.01 ng/cig 20 / 0.2 ng/cig 100 / 3.00 ng/cig - 20 / 0.20 ng/cig
	Nickel Arsenic Selenium Cadmium Lead		5 - 1 0.25 0.5 - 1.00	100 / 8.0 ng/cig - 40 /0.15 ng/cig - 40 / 0.5 ng/cig - 100 / 0.50 ng/cig - 100 / 3 ng/cig
	Phenols Catechol Phenol m- cresol p-cresol o-cresol Resorcinol Hydroquinone	In- house method TTP/VAL/HPHC/22-14 Issue No. 01, Revision No. 01, Dated: 11 <sup>th</sup> Jan 2014	$ \begin{array}{r} 1.60 \\ 0.40 \\ 0.40 \\ 0.40 \\ 0.40 \\ 0.40 \end{array} $	-14.00/0.32 μg/cig -56.0/0.08 μg/cig -14.0/0.04 μg/cig -14.0/0.03 μg/cig -14.0/0.08 μg/cig -14.0/0.08 μg/cig -112/0.26 μg/cig

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Accreditation Standard	ISO/IEC 17025: 2005			
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S.No. Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range Limits o	
b. Tobacco	Total Alkaloids As Nicotine	ISO-15152:2003 In-house method TTP/VAL/CHEM/8-12 Issue No. 01, Revision No. 00, Dated: 6 <sup>th</sup> Feb. 2013	0.20 to 4	1.00/0.09
	Reducing Sugars	In-house method TTP/VAL/CHEM/02-10 Issue No. 01, Revision No. 00, Dated: 1 <sup>st</sup> Dec. 2010	0.1 to 25	5/0.03 %
	Total Sugars	In-house method TTP/VAL/CHEM/03-10 Issue No. 01, Revision No. 00, Dated: 1 <sup>st</sup> Dec. 2010	0.2 to 25	5/0.06 %
	Chloride	In-house method TTP/VAL/CHEM/04-10 Issue No. 01, Revision No. 00, Dated: 1 <sup>st</sup> Dec. 2010	0.1 to 2.5	50/0.03
	Moisture Content	In-house method TTP/VAL/PHY/01-10 Issue No. 01, Revision No. 00, Dated: 1 <sup>st</sup> May 2010	8.0 to 18	3.0 %
		In-house method TTP/VAL/PHY/05-10 Issue No. 01, Revision No. 00, Dated: 1 <sup>st</sup> May 2010		
	Nitrate	ISO:15517:2003	0.10 to 2	2.00 %
	рН	Health Canada method No.T-310	4 to 14	

Accreditation StandardISO/IEC 17025: 2005DisciplineChemical TestingIssue Date $08.03.2014$ Certificate NumberT-0822Valid Until $07.03.2016$ Last Amended on-Page $8 of 13$ S.No.Product / Material of TestSpecific Test Performed Specific Test PerformedTest Method Specification against which tests are performedRange of Testing / Limits of DetectionS.No.Product / Material of TestSpecific Test PerformedTest Method Specification against which tests are performed0.1 to 10/0.05 %TobaccoRECON contentIn-house method TTP/VAL/CHEM/07-10 Issue No.00, Revision No.00, Dated: 1* Moz 20030.1 to 10/0.01 mg/kg 0.05 to 1.00 / 0.01 mg/kg 0.05 to 1.00	Laboratory		chnology Centre, No. 3, 1 <sup>st</sup> se, Bangalore, Karnataka	Main Ro	oad, Peenya
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Accreditation Standard ISO/IEC 17025: 2005				
Last Amended on       -       Page       8 of 13         S.No.       Product / Material of Test       Specific Test Performed performed       Test Method Specification against which tests are performed       Range of Testing / Limits of Detection         Tobacco       RECON content       In-house method TTP/VAL/CHEM/07-10 Issue No. 00, Dated: 1 <sup>st</sup> May 2009       0.1 to 100.05 %         Organochlorine Pesticides α - HCH       In-house Method TTP/VALAL/01-12 Issue No. 01, Revision No. 01 Dated: 1 <sup>st</sup> Oct. 2013       0.05 to 1.00 / 0.01mg/kg         β - HCH       Do5 to 1.00 / 0.01mg/kg       0.05 to 1.00 / 0.01mg/kg         β - HCH       0.05 to 1.00 / 0.01mg/kg         β - HCH       0.05 to 1.00 / 0.01mg/kg         Aldrin       0.05 to 1.00 / 0.01mg/kg         Chlordane       0.05 to 1.00 / 0.01mg/kg         Dieldrin       0.05 to 1.00 / 0.01mg/kg         Q-HDD       0.05 to 1.00 / 0.01mg/kg         Q-HDD       0.05 to 1.00 / 0.01mg/kg         Q-HDE       0.05 to 1.00 / 0.01mg/kg	Discipline	Chemical Testing	Issu	le Date	08.03.2014
S.No.Product / Material of TestSpecific Test PerformedTest Method Specification against which tests are performedRange of Testing / Limits of DetectionTobaccoRECON contentIn-house method TTP/VALCHEM/07-10 Issue No. 00, Revision No. 00, Dated: 1 <sup>st</sup> May 20090.1 to 10/0.05 %Organochlorine Pesticides $\alpha$ - HCHIn-house Method TTP/VAL/AL/01-12 Issue No. 01, Revision No. 01 Dated: 1 <sup>st</sup> May 20090.05 to 1.00 / 0.01mg/kg 0.05 to 1.00 / 0.01mg/kg 	Certificate Number	T-0822	Vali	d Until	07.03.2016
Material of Testagainst which tests are performedLimits of DetectionTobaccoRECON contentIn-house method TTP/VAL/CHEM/07-10 Issue No. 00, Revision No. 00, Dated: 1* May 20090.1 to 10/0.05 %Organochlorine PesticidesIn-house Method TTP/VAL/AL/01-12 Issue No. 01, Revision No. 01 $0.05$ to $1.00 / 0.01 mg/kg$ $0.05 to 1.00 / 0.01 mg/kg0.05 to 1.00 / $	Last Amended on	-	Pag	e	8 of 13
TTP/VAL/CHEM/07-10 Issue No. 00, Revision No. 00, Dated: 1 <sup>st</sup> May 2009       Subset No. 00, Revision No. 00, Dated: 1 <sup>st</sup> May 2009 <b>Organochlorine Pesticides</b> In-house Method TTP/VAL/AL/01-12 Issue No. 01, Revision No. 01 Dated: 1 <sup>st</sup> Oct. 2013       0.05 to 1.00 / 0.01mg/kg         β - HCH       Justed: 1 <sup>st</sup> Oct. 2013       0.05 to 1.00 / 0.01mg/kg         γ - HCH (Lindane)       0.05 to 1.00 / 0.01mg/kg         β - HCH       0.05 to 1.00 / 0.01mg/kg         Heptachlor       0.05 to 1.00 / 0.01mg/kg         Aldrin       0.05 to 1.00 / 0.01mg/kg         Oldrane       0.05 to 1.00 / 0.01mg/kg         Dieldrin       0.05 to 1.00 / 0.01mg/kg         Jeldrin       0.05 to 1.00 / 0.01mg/kg         Q-4-DDD       0.05 to 1.00 / 0.01mg/kg         Q-4-DDD       0.05 to 1.00 / 0.01mg/kg         Q-4-DDE       0.05 to 1.00 / 0.01mg/kg         Q-4-DDE       0.05 to 1.00 / 0.01mg/kg         Q-4-DDE       0.05 to 1.00 / 0.01mg/kg         Q-4-DDT       0.05 to 1.00 / 0.01mg/kg         Q-4-DDT       0.05 to 1.00 / 0.01mg/kg         Q-4 -DDT       0.05 to 1.00 / 0.01mg/kg         Q-5 to 1.00 / 0.01mg/k		Specific Test Performed	against which tests are		
TTP/VAL/AL/01-12 Issue No. 01, Revision No. 01 Dated: 1 <sup>st</sup> Oct. 2013       0.05 to 1.00 / 0.01 mg/kg         β - HCH       0.05 to 1.00 / 0.01 mg/kg         γ - HCH (Lindane)       0.05 to 1.00 / 0.01 mg/kg         δ - HCH       0.05 to 1.00 / 0.01 mg/kg         Heptachlor       0.05 to 1.00 / 0.01 mg/kg         Aldrin       0.05 to 1.00 / 0.01 mg/kg         Chlordane       0.05 to 1.00 / 0.01 mg/kg         Dieldrin       0.05 to 1.00 / 0.01 mg/kg         Dieldrin       0.05 to 1.00 / 0.01 mg/kg         Q.4-DDD       0.05 to 1.00 / 0.01 mg/kg         Q.4-DDE       0.05 to 1.00 / 0.01 mg/kg         Q.4-DDE       0.05 to 1.00 / 0.01 mg/kg         Q.4-DDT       0.05 to 1.00 / 0.01 mg/kg         Heptachlor Epoxide	Tobacco	RECON content	TTP/VAL/CHEM/07-10 Issue No. 00, Revision No. 00,	0.1	to 10/0.05 %
$\alpha$ - HCHIssue No. 01, Revision No. 01 Dated: 1st Oct. 20130.05 to 1.00 / 0.01 mg/kg $\beta$ - HCH0.05 to 1.00 / 0.01 mg/kg0.05 to 1.00 / 0.01 mg/kg $\delta$ - HCH0.05 to 1.00 / 0.01 mg/kg0.05 to 1.00 / 0.01 mg/kgHeptachlor0.05 to 1.00 / 0.01 mg/kg0.05 to 1.00 / 0.01 mg/kgAldrin0.05 to 1.00 / 0.01 mg/kg0.05 to 1.00 / 0.01 mg/kgChlordane0.05 to 1.00 / 0.01 mg/kgDieldrin0.05 to 1.00 / 0.01 mg/kg2,4-DDD0.05 to 1.00 / 0.01 mg/kg4,4-DDE0.05 to 1.00 / 0.01 mg/kg2,4-DDT0.05 to 1.00 / 0.01 mg/kg4,4 -DDT0.05 to 1.00 / 0.01 mg/kg		Organochlorine Pesticides			
β - HCH       Dated: 1 <sup>st</sup> Oct. 2013       0.05 to 1.00 / 0.01 mg/kg         γ - HCH (Lindane)       0.05 to 1.00 / 0.01 mg/kg         δ - HCH       0.05 to 1.00 / 0.01 mg/kg         Heptachlor       0.05 to 1.00 / 0.01 mg/kg         Aldrin       0.05 to 1.00 / 0.01 mg/kg         Chlordane       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg         Job to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/k		α - HCH		0.05	5 to 1.00 / 0.01mg/kg
δ - HCH       0.05 to 1.00 / 0.01mg/kg         Heptachlor       0.05 to 1.00 / 0.01mg/kg         Aldrin       0.05 to 1.00 / 0.01mg/kg         Chlordane       0.05 to 1.00 / 0.01mg/kg         Dieldrin       0.05 to 1.00 / 0.01mg/kg         2,4-DDD       0.05 to 1.00 / 0.01mg/kg         2,4-DDE       0.05 to 1.00 / 0.01mg/kg         2,4-DDE       0.05 to 1.00 / 0.01mg/kg         4,4 -DDE       0.05 to 1.00 / 0.01mg/kg         2,4 -DDT       0.05 to 1.00 / 0.01mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01mg/kg		β - HCH		0.05	5 to 1.00 / 0.01mg/kg
Heptachlor       0.05 to 1.00 / 0.01 mg/kg         Aldrin       0.05 to 1.00 / 0.01 mg/kg         Chlordane       0.05 to 1.00 / 0.01 mg/kg         Alpha Endosulphan       0.05 to 1.00 / 0.01 mg/kg         Dieldrin       0.05 to 1.00 / 0.01 mg/kg         2,4-DDD       0.05 to 1.00 / 0.01 mg/kg         4,4-DDD       0.05 to 1.00 / 0.01 mg/kg         2,4-DDE       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDE       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         6,5 to 1.00 / 0.01 mg/kg       0.05 to 1.00 / 0.01 mg/kg		γ - HCH (Lindane)		0.05	5 to 1.00 / 0.01mg/kg
Aldrin       0.05 to 1.00 / 0.01 mg/kg         Chlordane       0.05 to 1.00 / 0.01 mg/kg         Alpha Endosulphan       0.05 to 1.00 / 0.01 mg/kg         Dieldrin       0.05 to 1.00 / 0.01 mg/kg         2,4-DDD       0.05 to 1.00 / 0.01 mg/kg         4,4-DDD       0.05 to 1.00 / 0.01 mg/kg         2,4-DDE       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDE       0.05 to 1.00 / 0.01 mg/kg         2,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg		δ - ΗCΗ		0.05	5 to 1.00 / 0.01mg/kg
Chlordane       0.05 to 1.00 / 0.01 mg/kg         Alpha Endosulphan       0.05 to 1.00 / 0.01 mg/kg         Dieldrin       0.05 to 1.00 / 0.01 mg/kg         2,4-DDD       0.05 to 1.00 / 0.01 mg/kg         4,4-DDD       0.05 to 1.00 / 0.01 mg/kg         2,4-DDE       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDE       0.05 to 1.00 / 0.01 mg/kg         2,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg		Heptachlor		0.05	5 to 1.00 / 0.01mg/kg
Alpha Endosulphan       0.05 to 1.00 / 0.01 mg/kg         Dieldrin       0.05 to 1.00 / 0.01 mg/kg         2,4-DDD       0.05 to 1.00 / 0.01 mg/kg         4,4-DDD       0.05 to 1.00 / 0.01 mg/kg         2,4-DDE       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDE       0.05 to 1.00 / 0.01 mg/kg         2,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         Heptachlor Epoxide       0.05 to 1.00 / 0.01 mg/kg		Aldrin		0.05	5 to 1.00 / 0.01mg/kg
Dieldrin0.05 to 1.00 / 0.01 mg/kg2,4-DDD0.05 to 1.00 / 0.01 mg/kg4,4-DDD0.05 to 1.00 / 0.01 mg/kg2,4-DDE0.05 to 1.00 / 0.01 mg/kg4,4 -DDT0.05 to 1.00 / 0.01 mg/kg4,4 -DDT0.05 to 1.00 / 0.01 mg/kg4,4 -DDT0.05 to 1.00 / 0.01 mg/kgHeptachlor Epoxide0.05 to 1.00 / 0.01 mg/kg		Chlordane		0.05	5 to 1.00 / 0.01mg/kg
2,4-DDD       0.05 to 1.00 / 0.01 mg/kg         4,4-DDD       0.05 to 1.00 / 0.01 mg/kg         2,4-DDE       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDE       0.05 to 1.00 / 0.01 mg/kg         2,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         Heptachlor Epoxide       0.05 to 1.00 / 0.01 mg/kg		Alpha Endosulphan		0.05	5 to 1.00 / 0.01mg/kg
4,4-DDD       0.05 to 1.00 / 0.01 mg/kg         2,4-DDE       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDE       0.05 to 1.00 / 0.01 mg/kg         2,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         Heptachlor Epoxide       0.05 to 1.00 / 0.01 mg/kg		Dieldrin		0.05	5 to 1.00 / 0.01mg/kg
2,4-DDE       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDE       0.05 to 1.00 / 0.01 mg/kg         2,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         Heptachlor Epoxide       0.05 to 1.00 / 0.01 mg/kg		2,4-DDD		0.05	5 to 1.00 / 0.01mg/kg
4,4 -DDE       0.05 to 1.00 / 0.01 mg/kg         2,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         Heptachlor Epoxide       0.05 to 1.00 / 0.01 mg/kg		4,4-DDD		0.05	5 to 1.00 / 0.01mg/kg
2,4 -DDT0.05 to 1.00 / 0.01 mg/kg4,4 -DDT0.05 to 1.00 / 0.01 mg/kgHeptachlor Epoxide0.05 to 1.00 / 0.01 mg/kg		2,4-DDE			5 to 1.00 / 0.01mg/kg
4,4 -DDT       0.05 to 1.00 / 0.01 mg/kg         Heptachlor Epoxide       0.05 to 1.00 / 0.01 mg/kg		4,4 -DDE		0.05	5 to 1.00 / 0.01mg/kg
Heptachlor Epoxide 0.05 to 1.00 / 0.01 mg/kg		2,4 –DDT		0.05	5 to 1.00 / 0.01mg/kg
		4,4 –DDT		0.05	5 to 1.00 / 0.01mg/kg
Endrin 0.05 to 1.00 / 0.01 mg/kg		Heptachlor Epoxide		0.05	5 to 1.00 / 0.01mg/kg
		Endrin		0.05	5 to 1.00 / 0.01mg/kg

Laboratory		ITC Life Sciences & Technology Centre, No. 3, 1 <sup>st</sup> Main Road, Peenya Industrial Area, 1 <sup>st</sup> Phase, Bangalore, Karnataka			
Accreditation Standard		ISO/IEC 17025: 2005			
Discipline		Chemical Testing		Issue Da	te 08.03.2014
Certificate Num	ber	T-0822		Valid Unt	il 07.03.2016
Last Amended o	n	-		Page	9 of 13
S.No. Product / Material of		Specific Test Performed	Test Method Specifica against which tests are performed		Range of Testing / .imits of Detection
Tobacco		Organophosphate Pesticides	In-house method	(	
		Phorate	TTP/VAL/AL/03-12 Issue No. 01, Revision No	01	0.1  to  1.0 / 0.05  mg/kg
		Methyl Parathion Malathion	Dated: 1 <sup>st</sup> Oct. 2013		0.1 to 1.0 / 0.05 mg/kg
		Chloropyriphos			0.1 to $1.0 / 0.05$ mg/kg
		Primiphos Ethyl			0.1 to 1.0 / 0.05 mg/kg
		Phenthoate			0.1 to 1.0 / 0.05 mg/kg
		Ethion		0	0.1 to 1.0 / 0.05 mg/kg
		Formothion		0	0.1 to 1.0 / 0.05 mg/kg
		<b>Pyrithroid</b> Total Permethrin	In-house method TTP/VAL/AL/04-12		0.1 to 1.0 / 0.05 mg/kg
		Total Cypermethrin	Issue No. 01, Revision No Dated: 1 <sup>st</sup> Oct. 2013	. <sup>01,</sup> 0	0.1 to 1.0 / 0.05 mg/kg
		Total Fenvalerate		0	0.1 to 1.0 / 0.05 mg/kg
		Deltamethrin		0	0.1 to 1.0 / 0.05 mg/kg
		Herbicides	In house Method		
		Dicamba	TTP/VAL/AL/07-12 Issue No. 01, Revision No	. 01. 0	0.4 to 5.0 / 0.4 mg/kg
		2,4-D	Dated: 1 <sup>st</sup> Oct. 2013		0.4 to 5.0 / 0.4 mg/kg
		2,4,5-T		0	0.4 to 5.0 / 0.4 mg/kg
		Ash	In house Method	0	0.1 to 18 / 0.1%
		Acid insoluble ash as Silica	TTP/VAL/AL/06-12 Issue No. 01, Revision No Dated: 1 <sup>st</sup> Oct. 2013	. 01, 0	0.1 to 5 / 0.1%

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Accreditation Standard					
Discipline	Chemical Testing	lss	ue Date	08.03.2014	
Certificate Number	T-0822		Valid Until 07.03.20		
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S.No. Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed			
Tobacco	Toxaphene	In house Method TTP/VAL/AL/08-12 Issue No. 01, Revision No. 01, Dated: 1 <sup>st</sup> Oct. 2013	1.0 to 5.0/0.1 mg/kg		
	Metals Beryllium Chromium Cobalt Nickel Arsenic Selenium Cadmium Mercury Lead	In- house method TTP/VAL/HPHC/5-12 Issue No. 00, Revision No. 00, Dated: 5 <sup>th</sup> Dec. 2012	, 0.2 t 0.15 0.2 t 0.05 0.05 0.2 t 0.00	0.01 to 0.5 / 0.01 µg/g 0.2 to 12.5 / 0.1 µg/g 0.15 to 8 / 0.01 µg/g 0.2 to 12.5 / 0.1 µg/g 0.05 to 5 / 0.01 µg/g 0.05 to 5 / 0.01 µg/g 0.2 to 12.5 / 0.01 µg/g 0.005 to 0.5 / 0.01 µg/g 0.2 to 10 / 0.1 µg/g	
	Carbonyls Formaldehyde Acetaldehyde Crotonaldehyde Benzo(a)Pyrene Caffeic Acid	In - house method TTP/VAL/HPHC/13-12 Issue No. 00, Revision No. 00, Dated: 12 <sup>th</sup> Feb. 2013 In-house method TTP/VAL/HPHC/ 7-12 Issue No. 01, Revision No. 01, Dated: 31 <sup>st</sup> Oct. 2012 In-house method TTP/VAL/HPHC/10-12 Issue No. 01, Revision No. 01, Dated: 10 <sup>th</sup> April 2013	No. 00, 3 to 500 /1.0 μg/g 1 to 200/1 μg/g 3.00 to 150 / 1.50 ng No. 01, 20 to 500 / 0.2 μg/g		

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Discipline	Chemical Testing	Chemical Testing Is		Date 08.03.2014	
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S.No. Product / Material of Test	Specific Test Performed	Test Method Specifica against which tests an performed		Range of Testing / Limits of Detection	
Tobacco	Coumarin	In-house method TTP/VAL/HPHC/12-13 Issue No. 01, Revision No Dated: 25 <sup>th</sup> Mar. 2013	o. 01,	0.2 to 70 /0.1 µg/g	
	Ethyl carbamate	In-house method TTP/VAL/HPHC/8-12 Issue No. 01, Revision No. 01, Dated: 31 <sup>st</sup> Oct. 2012		100 to 2000 / 50.0 μg/g	
	Polycyclic AromaticIn-house methodHydrocarbonsTTP/VAL/HPHC/20-13Benz(a)anthraceneIssue No. 01, Revision No Dated: 15 <sup>th</sup> July 2013	o. 01,	0.83-333 / 0.5 ng/g		
	Chrysene			0.83-333 / 0.5 ng/g	
	Benzo(b)fluoranthene			0.83-333 / 0.5 ng/g	
	Benzo(k)fluoranthene			0.83-333 / 0.5 ng/g	
	Benzo(a)pyrene Dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene			0.83-333 / 0.5 ng/g	
				0.83-333 / 0.5 ng/g	
				0.83-333 / 0.5 ng/g	
	Napthalene			0.83-667 / 0.5	
	Minor Alkaloids Nornicotine Anabasine	In-house method TTP/VAL/HPHC/19-13 Issue No. 01, Revision No Dated: 15 <sup>th</sup> July 2013	o. 01,	94.0 - 2500 /1.0 μg/g 26.0 - 2500 /1.0 μg/g	

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Discipline	Chemical Testing	Chemical Testing Issue		Date 08.03.2014	
Certificate Number	T-0822	Valid	Valid Until 07.03.2016		
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S.No. Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed		ge of Testing / its of Detection	
Tobacco	N-Nitrosodimethylamine TTP/VAL/HPHC/15-1 N Nitrosoniparidina Issue No. 00, Revision	In-house method TTP/VAL/HPHC/15-13 Issue No. 00, Revision No. 01, Dated: 8 <sup>th</sup> Aug. 2013		12.5-250/1.1 μg/g 0.1-2/0.01 μg/g	
	N-Nitrosopyrolidine	Daled: 8 Aug. 2015	0.1-2	0.1-2/0.01 µg/g	
	N-Nitrosomorpholine		0.1-2	$0.1-2/0.02 \ \mu g/g$	
	N-Nitrososarcosine		0.1-5	0.1-5/ 0.3 µg/g	
	N-Nitrosodiethanolamine		0.5-5	0.5-5/0.01 µg/g	
	Aflatoxin-B1	In-house method TTP/VAL/HPHC/14-13 Issue No. 00, Revision No. 01, Dated: 15 <sup>th</sup> July 2013	0.5-4	40/ 0.1 μg/g	
	Ammonia	TTP/VAL/HPHC/6-12 Issue No. 00, Revision No. 01, Dated: 28 <sup>th</sup> Jan 2014	100-5000/20 µg/g		
c. Tobacco & Tobacco Products	Menthol content in Bobbins	In house Method	100	100 to 1000 / 15 mg/m	
	Menthol content in Cigarettes	TTP/VAL/AL/10-12 Issue No. 01, Revision No. 01, Dated: 4 <sup>th</sup> Nov. 2013	1.0 t	1.0 to 7.0 / 0.2 mg/cig	
	Propylene glycol	In house Method	0.25	0.25 to 5% / 0.1%	
	Glycerine	TTP/VAL/AL/11-12 Issue No. 01, Revision No. 01, Dated: 8 <sup>th</sup> Oct. 2013	0.5 t	0.5 to 5% / 0.25%	

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Discipline	Chemical Testing		Issue Da	ate 08.03.2014
Certificate Number	T-0822		Valid Until 07.03.2016	
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S.No. Product / Material of Test	Specific Test Performed			Range of Testing / Limits of Detection
Tobacco & Tobacco Products	Sodium benzoate	In house Method TTP/VAL/AL/11-12 Issue No. 01, Revision No Dated: 8 <sup>th</sup> Oct. 2013		0.01 to 5% / 0.001%
	<b>Tobacco specific nitrosoamines</b> N-Nitroso Nornicotine [NNN] N-Nitroso Anatabine [NAT] N-Nitroso Anabasine [NAB] 4-(Methylnitrosamino)-1- (3-pyridyl)-111-butanol [NNK]	In house Method TTP/VAL/AL/11-12 Issue No. 01, Revision No Dated: 1 <sup>st</sup> Aug. 2012		0.05 to 10/0.01 μg/kg