

Additional file 6. Distinguishing features of counterfeit artemether-lumefantrine labelled as manufactured by ‘Beijing Novartis Pharma Ltd, Beijing, China for Novartis Pharma AG, Basle, Switzerland’. Distinguishing features in red font.

Variable	Counterfeit		Genuine
	Gh 09-01	Gh 09-02	Ken 06-01
Packet			
Colour of inside surface	grey	whiter	greyer
Inside surface RGB %	82.6/77.2/74.9	99.5/97.1/96.0	97.9/95.3/96.0
White area RGB %	95.4/93.1/90.5	97.1/94.0/92.0	97.2/93.5/93.2
Yellow area RGB %	95.7/70.1/1.8	95.2/73.7/13.9	100.0/71.3/7.5
Red text ‘20/120’ RGB %	97.5/25.5/25.4	88.9/25.3/33.0	99.0/27.4/30.0
Top box side height/mm	20.0	20.0	20.0
Middle Right tab width/mm	33.5	31.5	31.5
Top Right tab flap width/mm	16.5	17.5	16.5
Bottom Right flap width/mm	16.5	18.5	16.5
Packet height at tallest	142.0	143.5	143.0
Packet max width when sealed/mm	104.0	104.0	105.0
Packet Top left tab width/mm	16.5	17.5	16.5
Middle Left tab width/mm	18.0	18.0	17.0
Bottom Left flap width/mm	33.5	31.5	32.0
Packet weight/g	4.87	5.13	5.14
Text	Less clear Accents of different font	Clear Accents of different font	Clear
Top box side at 2 locations - Degree sign (o) superscript size	Smaller	Larger	Medium
Bottom box side German text	‘Unter 30°C lagem’ spelling error with substitution of ‘m’ for ‘rn’. ‘Lagem’ is not a German word	‘Unter 30°C lagern’ ‘Lagern’ is German for store	‘Unter 30°C lagern’
Bottom box side at 2 locations Degree sign (o) superscript size	Smaller	Larger	Medium
Numbers Upper Right tab 114 417 891	Wider space between top 2 lines 114 & 417. Text not clear	Narrower space between top 2 lines 114 & 417. Text clear	Equal spacing 091 400 878
Number Upper Left tab	‘15’	‘17’	‘6’

Text Middle Right tab	'76832 dfes'	'76832 dfes'	'74802 dfes'
Middle Right Tab	Coloured bars 8 mm wide and in order: Black Red Pink Black No gap between coloured bars and packet edge	Coloured bars 3 mm wide and in order: Black Pink Yellow Black Gap between coloured bars and packet edge	Coloured bars 6mm wide and in order: Yellow Red Black No gap
Bottom Left Tab	Coloured bars 8.5 mm wide	Coloured bars 5.0 mm wide	Coloured bars 6.0 mm wide
LOT	M1200	X0089	X0124
EXP	05 2011	08 2010	07 2007
MFD	01 2009	07 2008	08 2005
NAFDAC Reg. No.	04-3275	04-3275	Not present
Blisterpack			
Foil texture and reflectance	Brighter	Duller	Brighter
Blisterpack dimensions/mm	39 x 92	39 x 94	39.5 x 98
Tablets per blisterpack	4 pairs of yellow tablets, embossed with score 'N C' and 'CG' on reverse	4 pairs of yellow tablets, embossed with score 'N C' and 'CG' on reverse	4 pairs of yellow tablets, embossed with score 'N C' and 'CG' on reverse
Printed Text	Different font, bolder font 'Coartem 20/120'	Different font, less bold font 'Coartem 20/120'	'Coartem 20/120'
Batch number, Mfg Date, Expiry Date	Nil	? X0088 EXP - ??-2-10 smudged	X0124 EXP 07 2007
Blister corners	angled	curved	curved
Tablet diameter/thickness mm	9.25/3.54	9.16/3.25	9.12 (9.10-9.13)/ 3.21 (3.21-3.22) ³
Tablet colour (on CG side) RGB %	69/57/27	54/47/15	99.7/95.1/68.9
Leaflet			
Dimensions/mm	145 x 585	141 x 588	148 x 594
Paper colour	White	Creamier	Creamier
Blank paper RGB %	90.5/89.8/94.2	95.0/91.3/92.4	99.4/98.6/99.7