WARNING !!!!

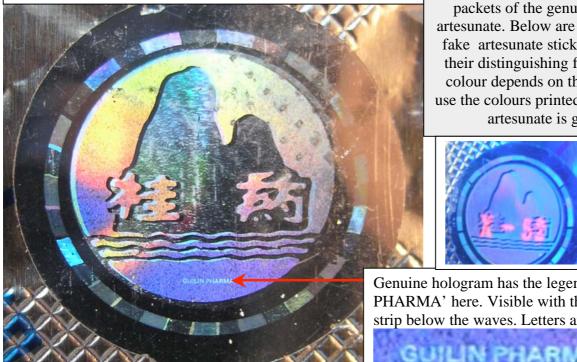
August 2005

AT LEAST TWELVE DIFFERENT TYPES OF FAKE ARTESUNATE ARE BEING SOLD **IN MAINLAND SOUTH EAST ASIA**

HERE ARE SOME KEY FEATURES TO AID IDENTIFICATION OF FAKE 'GUILIN PHARMA' **ARTESUNATE BLISTER PACK HOLOGRAMS**

BLISTER PACKS WITH FAKE HOLOGRAMS CONTAIN NO ARTESUNATE AND ARE **THEREFORE POTENTIALLY LETHAL**

Genuine 'Guilin Pharma' Hologram



The photograph, left, is of the genuine hologram attached to the blister packs and packets of the genuine 'Guilin Pharma' artesunate. Below are pictures of 11 types of fake artesunate stickers & holograms with their distinguishing features. As hologram colour depends on the light, please do not use the colours printed here to judge whether artesunate is genuine or fake



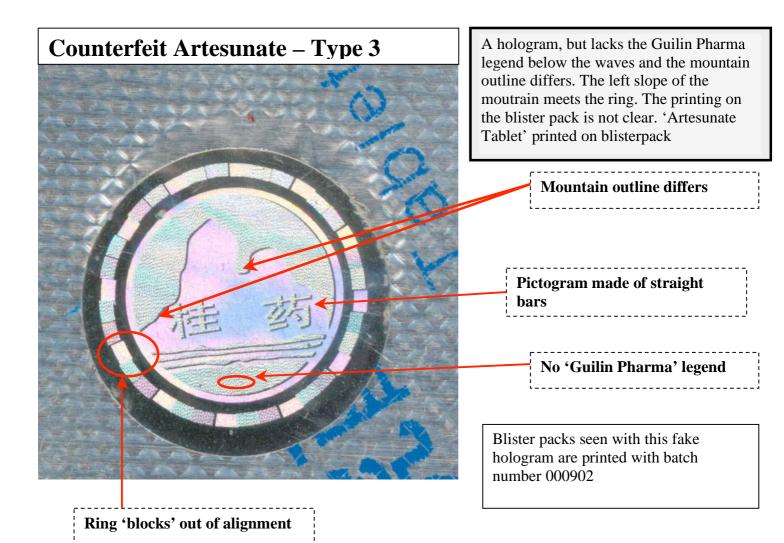
Genuine hologram under UV light with 'X-52' at mountain base

Genuine hologram has the legend 'GUILIN PHARMA' here. Visible with the naked eye, as a thin strip below the waves. Letters are ~ 0.1 mm high

Guilin Pharma developed their hologram as a security device in response to the first type ('Type 1') of counterfeit artesunate circulated which had no hologram attached. As a result, any 'Guilin Pharma' artesunate now circulating without a blister pack hologram is almost certainly counterfeit or expired. Subsequently, at least 11 different types of counterfeit 'Guilin Pharma artesunate' have been found in Southeast Asia [Burma (Myanmar), Cambodia, Lao PDR, Thailand (only on the western border) and Vietnam] with counterfeit stickers or holograms, and there are probably more types circulating. Genuine and counterfeit holograms are ~ 13 mm in diameter. The genuine hologram and 'Type 10' have 'X-52' visible across the mountains when viewed under UV light. Other features of the counterfeit artesunate that differ from the genuine product include – poor printing of bar codes on packets, poor printing of codes on blister packs, codes on blister packs printed with the font made of numerous small dots, poor stamping of code 'AS' and score line on tablets, raised edges of tablets, very hard tablets, blisterpack abbreviations in capital letters ('MFG' and 'EXP') and unusually late expiry date in relation to date of manufacture (>3years). Counterfeits tend to be cheaper than the genuine product. Although, regrettably, the counterfeiters have targeted the 'Guilin Pharma' product, it is possible that other fake artesunate products exist. Therefore, drug regulatory authorities should be vigilant and regularly monitor the quality of artesunate available on the market. If you are uncertain as the authenticity of any artesunate sample based on the characteristics of the packaging, please check by chemical analysis of the tablet

Wellcome Trust Oxford SE Asian Tropical Medicine Research Units: 3rd edition; 25th August 2005 With very many thanks to the numerous people who assisted with this project Please distribute : Copies available from paul@tropmedres.ac

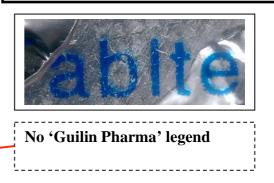
Counterfeit Artesunate – Type 2	A foil sticker. Not a true hologram; dull, not diffractive when tilted in the light. Not well crafted. 'Artesunate Tablet' printed on blisterpack
A CONTRACTOR	Grey outer ring
THANK PET	Inner ring rectangles do not vary in colour
	No 'Guilin Pharma' legend
	Blister packs seen with this fake sticker are printed with batch numbers 970901, 980201 or 980502.



Counterfeit Artesunate – Type 4



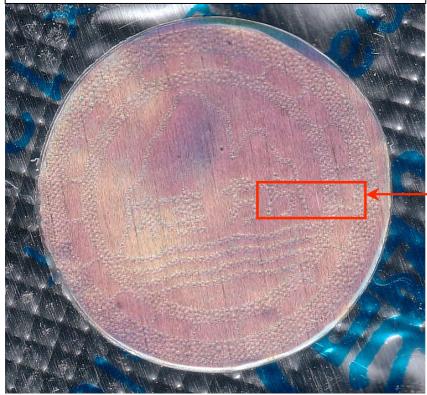
A hologram – mountain outline similar to that on the genuine hologram, but lacks the 'Guilin Pharma' legend below the waves. The printing on the blisterpack is clear. 'Artesunate Tablet', 'Artesunate Tablets' or Artesunate Tablte' (see below) printed on blisterpack



Blister packs seen with this fake hologram are printed with batch numbers 010901, 021001 or 020305.

Ring 'blocks' out of alignment

Counterfeit Artesunate – Type 5



Foil sticker, not a hologram, with pattern composed of thousands of dots copying the genuine Guilin Pharma artesunate hologram pattern. Easily distinguished. 'Artesunate Tablet' printed on blisterpack



Blister packs seen with this fake sticker are printed with batch number 010401.

Counterfeit Artesunate – Type 6



Well crafted hologram - but the junction between the mountains and the waves differs from that depicted on the genuine hologram. There is an indistinct legend to the right of centre, beneath the waves

Crescents, rather than a continuous blank line, between mountain and waves

Indistinct writing below waves, ending in '...MA', to the right of centre

Blister packs seen with this fake hologram are printed with batch numbers 030101 and 010101

Ring 'blocks' out of alignment

Counterfeit Artesunate – Type 7



Ring 'blocks' out of alignment

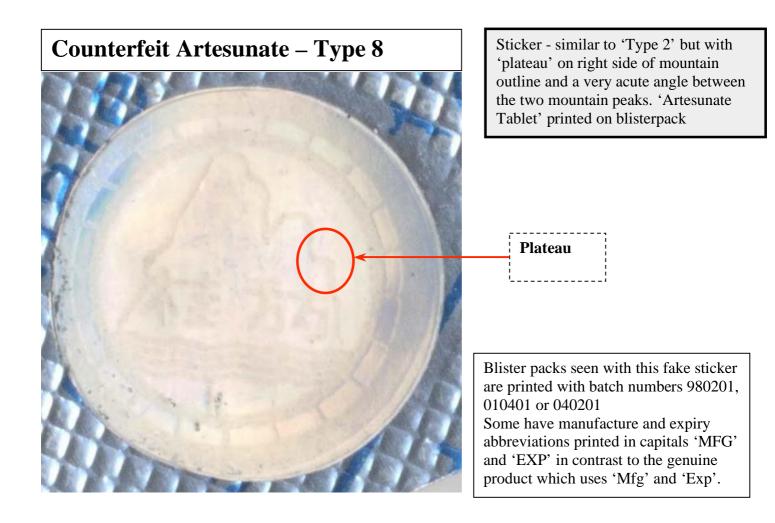
Well crafted hologram - with 'GUILIN PHARMA' written below the waves but in an abnormally large font

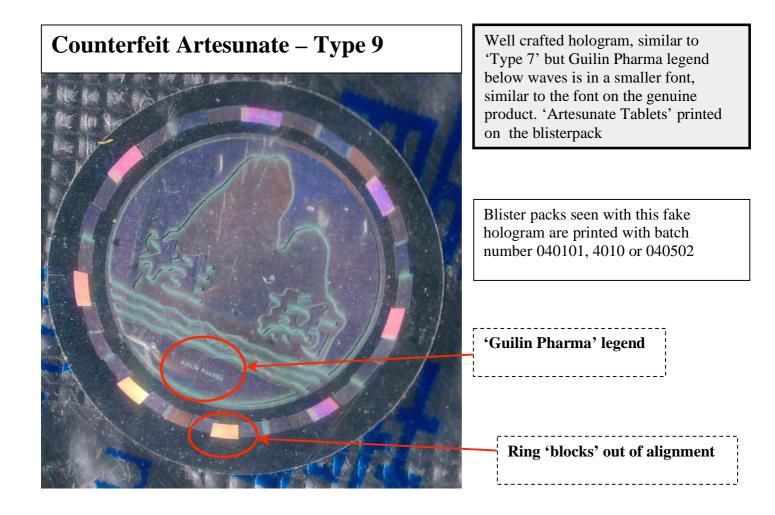
'Guilin Pharma' legend present but the letters are of larger font than those on the genuine hologram and can be read with the naked eye. Letters are ~ 0.3 mm high.

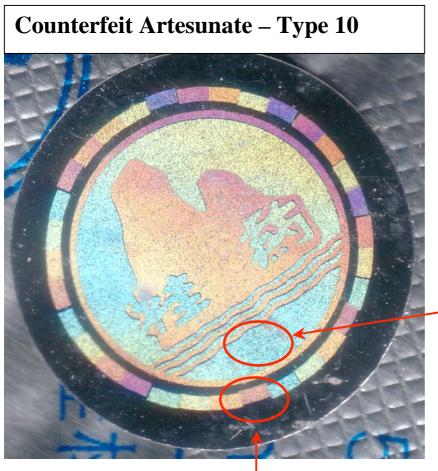


Blister packs seen with this fake hologram are printed with batch number 000801.

Date of expiry is normally 3 years after date of manufacture. This type has an abnormally long life time of nine years







Ring 'blocks' out of alignment

Well crafted hologram, similar to 'Type 4', but has 'X-52' visible under UV light on hologram (see below). The X-52 is however stamped across the middle, rather than the base, of the mountains. 'Artesunate Tablets' printed on blisterpack.



No Guilin Pharma legend

Blister packs seen with this fake hologram are printed with batch number 040301

Counterfeit Artesunate – Type 11



Sticker, similar to 'Type 2' and '8' but mountain outline differs and poorly manufactured. 'Artesunate Tablet' printed on blisterpack.

Blister packs seen with this fake sticker are printed with batch numbers 010401, 020402, 030301

Manufacture and expiry abbreviations are printed in capitals 'MFG' and 'EXP' in contrast to the genuine product which uses 'Mfg' and 'Exp'.

Counterfeit Artesunate – Type 12



Sticker, with similar mountain outline to 'Type 8' and '11' but with a grid of large dots and a 'cloth' like appearance 'Artesunate Tablets' printed on blisterpack.

Blister packs seen with this fake sticker are printed with batch number 040201.

Manufacture and expiry abbreviations are printed in capitals 'MFG' and 'EXP' in contrast to the genuine product which uses 'Mfg' and 'Exp'.