

These guidelines are specific to your attempt and **must** be followed. Should any guideline be contravened, your attempt will be disqualified, without any right of appeal.

## **HOTTEST CHILI**

### **DEFINITION OF RECORD**

This record is based on the heat of a chili pepper.

This record is to be attempted by an individual.

This record is measured both in Scoville heat units (SHU) and in American Spice Trade Association pungency units, using high performance liquid chromatography. These units measure the concentration of capsaicin in the pepper.

### **GUIDELINES FOR 'HOTTEST CHILI'**

1. A signed statement of authentication must be submitted by a suitably qualified person (e.g. a horticulturalist), including a contact address and telephone number. The species and/or variety of plant must be correctly identified and stated in all cases. Claims submitted through established specialist publications are welcome.
2. SHU and American Spice Trade Association pungency units must be determined using high performance liquid chromatography (HPLC), which must be performed by a certified laboratory.
3. Details of the growth of the plant(s) must be provided.
4. At least two independent witnesses, including at least one chemist and one horticulturalist, must submit statements regarding both the growth process and testing process.
5. Any articles about the pepper published in scientific journals should also be submitted.

6. Photographs of the pepper and the testing process must be provided.

### **GENERAL GUIDELINES**

- The name of the organisation, company or person(s) making the attempt must be given, along with the date and place.
- The event should take place in a public place or in a venue open to public inspection.

### **ADDITIONAL EVIDENCE**

- Failure to include the required documentation will ultimately delay the outcome of your claim or lead to its rejection.



### ***About our tests:***

Report from the lab with the results...

Even our BHUT which we grow here on our property, which is the Jolokia or Ghost chilli and previous world record holder, is hotter than the "original" world record of the same chilli (we scored: 1,110,900 SHU).

We found that the better you treat your chillies the hotter they get!!

As a sample see report from lab... it says Bhut Hothouse ....The Bhuts from the hothouse had it too hot when heatwave came across the Hunter and you can see that they get a less hot rating straight away... too much suffering and they do not like that at all...Very sensitive and need lots of attention and worm juice offcourse!

Mark Peacock knows much more about this ... it is his kind of field but also on-line some various sources state actually the same as we found while growing our chillies for the past 3 years:

[http://en.wikipedia.org/wiki/Dorset\\_Naga](http://en.wikipedia.org/wiki/Dorset_Naga)

The effect of [climate](#) on the Scoville rating of Bhut Jolokia peppers is dramatic. A 2005 study comparing percentage availability of capsaicin and dihydrocapsaicin in Bhut Jolokia peppers grown in [Tezpur \(Assam\)](#) and [Gwalior \(Madhya Pradesh\)](#), [India](#) showed that the heat of the pepper is decreased by over 50% in Gwalior's more arid climate.<sup>[23]</sup> Elsewhere in India, scientists at [Manipur University](#) measured Bhut Jolokia's average Scoville rating by HPLC at only 329,100 SHU.<sup>[20]</sup>

## FACEBOOK

Over the past year since we have had the Guinness World Record there have been stories in newspapers and on-line about the fact that we:

- Tested only one pod of chilli so our record is an incident
- Are not commercial growers???
- Have not tested it Scientifically

Well guess what?

- This is how we test our chillies, See photo...

This is what we send to the lab for testing! And we do this on a regular base too!! (So no not one test and got lucky and certainly NOT ONE POD!!)

OK I wear glasses so I am bias but.... does that look like one pod to you?

Randomly picked ofcourse and so the measurement will be an average!! I think the Yanks call that MEAN of various Scorpion Pods from various plants AND from different chilli fields.

We have 3,000 Scorpion plants to choose from is that commercial enough?

So the Guinness World Record was:

- Tested more than one pod, tick
- 3,000 Trinidad plants, commercial growers, tick
- Scientifically tested and averaged/MEAN heat, tick

Anybody telling you differently just tell them to read this ... and yes we have had to send a scientifically correct tested, backed up by THREE horticulturists pack with lots of information to Guinness World Record to PROOF we did it Scientifically!

Thanks for your time...

### ***How does the chilli factory test the heatlevel of their chillies?***

Statement of Authentication which explains the type of chilli (cultivar)

Quantifying capsaicinoids

Claim information.odt

Appendix A proof that we used various pods.pdf

Appendix B Outsider to approve measurements.pdf

there's a lot of stories going around on the internet, ofcourse... not all of them are true. With this writing I would like to explain how we conduct our tests for the Scoville heat in our chillies.

## World record

The Trinidad Scorpion Butch T pepper formerly ranked as the most [piquant](#) pepper in the world, according to [Guinness World Records](#).<sup>[2]</sup> According to the New Mexico State University's Chile Pepper Institute, the distinction of world's most piquant pepper currently belongs to the [Trinidad Moruga Scorpion](#).<sup>[3]</sup> A laboratory test conducted in March, 2011 measured a specimen of Trinidad Scorpion Butch T at 1,463,700 [Scoville heat units](#).<sup>[4]</sup> Piquance of a species of chili pepper can vary by up to a factor of 10 depending on the conditions under which the specimen grew.<sup>[5]</sup> [High-performance liquid chromatography](#) has limited precision and a [margin of error](#) of about 5% of the true value; Scoville units reported with more than two [significant figures](#) should be regarded as for entertainment purposes only and not a scientific assessment of the piquance of the pepper.<sup>[6]</sup>

[http://en.wikipedia.org/wiki/Trinidad\\_Scorpion\\_Butch\\_T\\_pepper](http://en.wikipedia.org/wiki/Trinidad_Scorpion_Butch_T_pepper)

This bit of text implicates that what we are doing here at the chilli factory is:

- Not real science because we are not a university?
- We used not enough testing?
- We are entertaining people?

but wait there's more!!

no mention of the record holders The Chilli Factory, The Hippy Seed Company and Mark Peacock

[http://en.wikipedia.org/wiki/Trinidad\\_Moruga\\_Scorpion](http://en.wikipedia.org/wiki/Trinidad_Moruga_Scorpion)

The **Trinidad Moruga Scorpion** (*Capsicum Chinense*), endemic to the district of [Moruga](#) in [Trinidad and Tobago](#), is currently the world's hottest [Chili pepper](#) cultivar. The [New Mexico State University's](#) Chili Pepper Institute has identified the Trinidad Moruga Scorpion as the newest hottest chili pepper in the world as of February 2012.<sup>[1][2]</sup> According to the New Mexico State University Chili Institute, the Trinidad Moruga Scorpion ranks as high as

2,009,231 SHU on the [Scoville scale](#), making it the hottest chili pepper in the world to date.<sup>[3]</sup>

Paul Bosland, a renowned chili pepper expert and director of the Chili Institute, said that, "You take a bite. It doesn't seem so bad, and then it builds and it builds and it builds. So it is quite intense."<sup>[1]</sup>

The golf ball-sized chili pepper scored the highest among a handful of chili cultivars reputed to be among the hottest in the world. Its mean heat topped more than 1.2 million units on the Scoville heat scale, while fruits from some individual plants reached 2 million heat units.<sup>[1]</sup>

Leaving out the heat the Moruga Scorpion has a tender fruitlike flavor, which makes it a unique sweet-hot combination.<sup>[2]</sup>

it makes you wonder who writes these pieces on Wikipedia??  
name and also links to their website and also the fact that it has been tested properly  
no downsizing here!!

well lets look at real life and the facts... I will show you how we conduct our tests and then you can judge. If you still not trust us? come over to our farm and you can see we are real people working very hard to get things done and are really serious about growing chillies **COMMERCIALY** and also getting thisngs done right!

we use various chiillies and from variuos plants for our testing! it is **NOT** one pot we test... but an verage of somany pods together and yes tests fluctuated offcourse it is an all natural product. same with tomatoes and cucunmbers they will all look different and have different colours and it all so dependsa upond the season and time of year et cetera.....

Report date: 1 March 2011

The Chilli Factory, Marcel's Pty. Ltd., t/as  
1 Ironbark Road  
MORISSET NSW 2264

Attention Marcel de Wit

### INTERIM REPORT

Overall Description: Chilli, Rec 03/02/11

Samples received: 3 February 2011 at 9:55 hrs. Testing commenced: 4 February 2011 at 10:00 hrs.

EML S/No	Sample Marking:	Scoville Heat Units
429018	Samples tested as received into the laboratory	SH Units
1	Scorpion Marcel	1,463,700
2	YF Marcel	426,550
3	Green YE7	591,000
4	BHUT Marcel	1,110,900
5	BHUT Hot House 1	820,944
6	Scorpion Barry	Pending
Method:		5.0.145

< = Less than ~ = Estimated Pres = Presumptive Y = Yeasts M = Moulds SPC = Standard Plate Count ND = Not detected -- = Not tested

#### SHU/ASTA Rating (via HPLC Analysis):

**Scoville Heat Units:** 1,463,700

**ASTA:** 97580 parts per million

#### Growth and Cultivation of plants:

Fruit subjected to HPLC analysis was randomly sampled from 3 separate planting locations (Ettalong Beach, Booker Bay and Morisset, NSW) so as to fortify the accuracy of data obtained.

- Plants were sown into jiffy pellets from seed maintained by Neil Smith in August 2010.
- Upon germination plants were permitted to grow under natural light until the 2 true-leaf stage after which they were transplanted into either pots (Ettalong Beach, Booker Bay) or into pre-prepared, raised beds (Morisset)
- Media in pots consisted of coir peat + Debco potting mix + Yates Dynamic Lifter. Pre-prepared raised beds utilised existing soil (Black Vertosol) supplemented with Yates Dynamic Lifter.

- Soluble high potassium fertiliser (Yates Flower and Fruit applied at label rate) was tank-mixed with worm fertiliser (supplied by Neil Smith and applied at a 1:100 ratio with water) and applied at weekly intervals at all 3 growing locations. Monthly application of Yates Dynamic Lifter was also undertaken.
- Plants were watered daily throughout the growing period.
- Harvesting of pods was undertaken when fruit was shown to be fully mature.
- Harvested pods were selected at random from all 3 locations and dried using a food dehydrator, packaged and shipped to the Laboratory.

#### Independent Witness statements:

- Growth Process: See Appendix A  
proof of various pods from various fields of our chillies

I, Evan Graham decree that the growth and cultivation of the plants supplying the fruit for testing has been undertaken according to customary horticultural practices. I have visited the 3 growing sites and have reviewed the cultivation practices. The random sampling of fruit for testing is congruent with scientific sampling methods and will ensure a representative set of results are obtained for this experiment.

Information regarding the taxonomic classification of the Trinidad Scorpion "ButchT" variety is up to date and corresponds to material published in the literature.

- Lab testing Process: See Appendix B  
proof of correct measurement of the testing.

To whom it may concern,

I Allan Hsieh state that the HPLC method for capsaicinoid quantification provides an accurate representation of the pungency of the Trinidad Scorpion "Butch T" cultivar.

The process undertaken is consistent with that documented by Collins et al (1995) and that used during measurement and quantification of the Bhut Jolokia by Bosland and Baral (2007).

The HPLC machine was calibrated prior to the addition of samples with samples of predetermined capsaicinoid concentration. HPLC-Grade Methanol was used as the solvent for extraction of capsaicinoids. Machine run times of between 7 and 20 minutes were analyzed for total capsaicinoid and capsaicinoid fractional components.

Complete analysis of samples has been undertaken independently and results are attached.

#### Journal Articles:

Development of HPLC testing method:

Collins, M.D., Wasmund, *L.M and Bosland*, P.W.1995.Improved method for quantifying capsaicinoids in Capsicum using High Performance Liquid Chromatography. Hortscience 30(1):137-139.

Use of HPLC method for testing Bhut Jolokia:

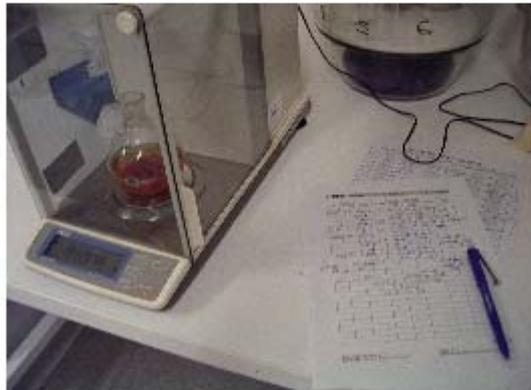
Bosland, P.W and Baral, J.B. 2007. Bhut Jolokia'—The World's Hottest Known Chile Pepper is a Putative Naturally Occurring Interspecific Hybrid. Hortscience 42(2):222–224.

### Photographs:

- Chilli:



- Testing process:



*Names of Persons undertaking the record attempt:  
The Chilli Factory, Marcel De Wit,  
The Hippy Seed Company, Neil Smith,  
Mark Peacock B.Hort Sc (Hons 1<sup>st</sup> Class),  
Butch Taylor.*

## World's Hottest Chilli:

### Statement of Authentication:

The requested record claim is genuine with regard to the following stated information and all processes undertaken, including plant growth and cultivation, sampling and laboratory testing. Every necessary provision has been utilised in order to obtain accurate and unbiased results.

### Species/cultivar:

The following systematic classification identifies the Trinidad Scorpion:

**Family:** Solanaceae

**Genus:** Capsicum

**Species:** Suspected interspecific hybrid between *C.chinense* x *C.frutescens*.

This has yet to be demonstrated through the use of genetic sequencing analysis but Principal Component Analysis has identified multiple morphological distinctions common to both *C.chinense* and *C.frutescens* (unpublished data). The Trinidad Scorpion "Butch T" cultivar is easily differentiated from other Trinidad Scorpion varieties by its fruit which exhibits extensively wrinkled skin.

**Cultivar:** Trinidad Scorpion "Butch T"

Mark Peacock:

Signature:





## CERTIFICATE

**The hottest chilli  
is the Trinidad Scorpion "Butch T"  
which was grown by  
The Chilli Factory (Australia)  
and rated at 1,463,700  
Scoville Heat Units (SHU)  
according to tests conducted  
by EML Consulting Services  
in Morisset, New South Wales, Australia,  
on 1 March 2011**

GUINNESS WORLD RECORDS LTD