



Table to accompany the talk “**San Pedro**”
presented by **Keeper Trout** at the
Entheo Genesis Australis December 2011

“species”	Collection number	%M	Form	Origin	Reference
			(a) = dry green parenchyma only (b) = dry whole plant (aerial part) (c) = fresh plant (d) = extract		
<i>Trichocereus bridgesii</i> (AKA <i>Echinopsis lageniformis</i>)					
	na	0.18%	(a)	Horticulture, Gillette	Ogunbodede <i>et al.</i> 2010
	na	0.25%+	(b)	Horticulture, European	Agurell 1969b
	na	0.56%	(a)	La Paz, Bolivia	Serrano 2008
f. <i>monstrose</i>	na	0.48%	(a)	Horticulture, California	Ogunbodede <i>et al.</i> 2010
<i>Trichocereus cuzcoensis</i> (AKA <i>Echinopsis cuzcoensis</i>)					
	na	0.0%	(a)	Cotaruse, Arequipa, Peru	Serrano 2008
	na	0.0%	(a)	Huaytampo, Cuzco, Peru	Serrano 2008
	na	0.0%	(a)	Huacarpay, Cuzco, Peru	Serrano 2008
	na	0.0%	(a)	Capacmarca, Cuzco, Peru	Serrano 2008
	na	0.005–0.05%	(c)	Horticulture Germany	Agurell <i>et al.</i> 1971
					+ results were also reported in Lindgren <i>et al.</i> 1971
<i>Trichocereus macrogonus</i> (AKA <i>Echinopsis macrogona</i>)					
	na	0.005-0.025%	(c)	Horticulture, Europe	Agurell <i>et al.</i> 1969b

***Trichocereus pachanoi* (AKA *Echinopsis pachanoi*)**

na	0.00%	(a)	El Alisal, San Marcos, Cajamarca, Peru	Cjuno <i>et al.</i> 2009
na	0.109– 2.375%	(b)	Horticulture Switzerland (6 specimens)	Helmlin & Brenneisen 1992
na	5%	(a)	Cultivated Lima Botanical Garden	Cruz Sanchez 1948
na	0.15– 0.155%	(b)	Horticulture California	Pummangura <i>et al.</i> 1982a
na	2.06%	(b)	Horticulture Italy	Gennaro <i>et al.</i> 1996
na	0.331%	(b)	Horticulture California	Crosby & McLaughlin 1973
na	0.9%	(d)	Drug plant from Peru	Turner & Heyman 1960
na	0.025%+	(c)	Horticulture European	Agurell 1969b
na	0.04– 0.067%	(c)	Horticulture European	Agurell 1969a
na	0.067– 0.079%	(c)	Horticulture European	Bruhn & Holmstedt 1976a
na	1.2%	(b)	Huancabamba, Peru witches market material from Claudine Friedberg	Poisson 1960
na	4.5	(a)	Witches market material, Peru	Gonzales Huerta 1960
na	0.78%	(b)	Chiclayo, Peru	Reyna Pinedo & Flores Garcés 2001
na	1.4%	(b)	Barranca, Peru	Reyna Pinedo & Flores Garcés 2001
na	0.23%	(a)	Moyán, San Vincente, Lambayeque, Peru	Cjuno <i>et al.</i> 2009

***Trichocereus pachanoi* (AKA *Echinopsis pachanoi*) continued**

na	0.28%	(a)	Puykate, Ferrefiafe, Lambayeque, Peru	Cjuno <i>et al.</i> 2009
na	0.45%	(a)	Kuntur Wasi, San Pablo, Cajamarca, Peru	Cjuno <i>et al.</i> 2009
na	0.94%	(a)	Tocmoche, Chota, Cajamarca, Peru	Cjuno <i>et al.</i> 2009
na	1.14%	(a)	Laquipampa, Ferrefiafe, Lambayeque, Peru	Cjuno <i>et al.</i> 2009
na	0.54%	(a)	<i>cv peruvianus</i> Huancabamba	Ogunbodede <i>et al.</i> 2010 (Note 1) shorter spines
na	1.2%	(a)	<i>cv peruvianus</i> Huancabamba	Ogunbodede <i>et al.</i> 2010 (Note 1) longer spines
na	0.00%	(a)	Cataratas, Otuzco, La Libertad, Peru	Cjuno <i>et al.</i> 2009
na	0.38%	(a)	Yanasara, Sánchez Carrión, La Libertad, Peru	Cjuno <i>et al.</i> 2009
PCH <i>et al.</i> 6212	0.82%	(a)	Clone collected Rio Marañon, La Libertad Dept., Peru	Ogunbodede <i>et al.</i> 2010
na	1.4%	(a)	<i>cv. Juuls Giant</i>	Ogunbodede <i>et al.</i> 2010 (Note 2)
na	4.7%	(a)	Matucana, Peru	Ogunbodede <i>et al.</i> 2010 (Note 3)

***Trichocereus pallarensis* (Name invalid. Probably f. *Echinopsis pachanoi*)**

FR 676	0.47%	(a)	Ritter seed via H. Winter	Ogunbodede <i>et al.</i> 2010
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***Trichocereus peruvianus* (AKA *Echinopsis peruviana*)**

na	0.0%	(b)	Harvested in Peru	Djerassi <i>et al.</i> 1955 (Note 4)
na	0.0%	(b)	Horticulture European commercial	Agurell 1969b (Note 5)
na	0.056%	(na)	Commercial product	Health Canada 2004 (Note 6)
na	0.25%	(a)	Chavin de Huantar, Huari, Ancash, Peru	Cjuno <i>et al.</i> 2009
KK242	0.24%	(a)	Grown from a cutting sent by Knize in Peru.	Ogunbodede <i>et al.</i> 2010
KK 242	0.817%	(b)	Horticulture California Knize seed grown by Abbey Garden	Pardanani <i>et al.</i> 1977

***Trichocereus puquiensis* (AKA *Echinopsis peruviana* var. *puquiensis*)**

na	0.11%	(a)	Incuyo, Parincochas, Ayacucho, Peru	Serrano 2008/ Cjuno <i>et al.</i> 2009
na	0.13%	(a)	Chumpi, Parincochas, Ayacucho, Peru	Serrano 2008/ Cjuno <i>et al.</i> 2009
PCH 1256a	0.13%	(a)	Clone was collected in Ayacucho Dept., Peru "across canyon from Pachan"	Ogunbodede <i>et al.</i> 2010
na	0.28%	(a)	Chaviña, Lucanas, Ayacucho, Peru	Serrano 2008/ Cjuno <i>et al.</i> 2009
na	0.50%	(a)	Vado, Lucanas, Ayacucho, Peru	Serrano 2008/ Cjuno <i>et al.</i> 2009

T. riomizquiensis (Name invalid. Probably f. *Echinopsis pachanoi*)

FR 856	0.4%	(a)	NMCR via Rivière de Caralt	Ogunbodede <i>et al.</i> 2010
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T. santaensis (AKA *Echinopsis santaensis* Probably f. *Echinopsis pachanoi*)

<i>na</i>	0.31%	(a)	Mancos, Yungay, Ancash, Peru	Cjuno <i>et al.</i> 2009
OST 92701	0.32%	(a)	Horticulture, California Seed from Santa Valley, Ancash Dept., Peru	Ogunbodede <i>et al.</i> 2010

T. scopulicola (AKA *Echinopsis scopulicola*) Probably now extinct in the wild.

FR 991	0.85%	(a)	NMCR via Rivière de Caralt	Ogunbodede <i>et al.</i> 2010
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T. schoenii (Now lumped as synonym of *Echinopsis cuzcoensis*)

<i>na</i>	0.22%	(a)	Cotahuasi, La Unión, Arequipa, Peru	Serrano 2008/ Cjuno <i>et al.</i> 2009
<i>na</i>	0.20%	(a)	Pampacola, Castilla, Arequipa, Peru	Serrano 2008/ Cjuno <i>et al.</i> 2009
<i>na</i>	0.14%	(a)	Huambo, Arequipa , Peru	Serrano 2008/ Cjuno <i>et al.</i> 2009

T. strigosus (AKA *Echinopsis strigosa*)

<i>na</i>	0.0%	(c)	European horticultural	Agurell <i>et al.</i> 1971
<i>na</i>	trace	(a)	Argentina: Mendoza & San Juan Prov.	Nieto <i>et al.</i> 1982

***T. taquimbalensis* (AKA *Echinopsis taquimbalensis*)**

na 0.22% (a) Netherlands Agurell *et al.*
horticultural 1971

***T. terscheckii* (AKA *Echinopsis terscheckii*)**

na 0.005– (c) European Agurell 1969b
0.025% horticultural

na 0.0– (b) wild Argentina Reti & Castrillón
0.04% 1951

Note 8

***T. thelegonoides* (AKA *Echinopsis thelegonoides*)**

na 0% (a) Germany Agurell *et al.*
Note 9 horticultural 1971

na traces (a) Italian Siniscalco 1983
horticultural

***T. uyupampensis* (AKA *Echinopsis uyupampensis* or not recognized)**

na 0.05% (a) UC Backeberg Ogunbodede *et*
clone from *al.* 2010
Monaco

***T. validus* (AKA *Echinopsis valida*)**

na 0.025%+ (c) Kew Gardens Agurell *et al.*
1971

***T. vollianus* (AKA *Echinopsis volliana*)**

na traces (b) Italian Siniscalco 1983
horticultural

***T. werdermannianus* (AKA *Echinopsis werdermanniana*)**

na 0.005– (c) European Agurell 1969a /
0.025% horticultural Agurell 1969b

Endnotes

Note 1 These variants were grown by two different commercial propagators using the same seed stock that was collected by Dick Van Geest at Huancabamba, Peru during the 1960s.

Note 2 cv. Juuls Giant was assigned a trade name name to differentiate it from the predominate *pachanoi* cultivar also being propagated commercially by Cactus Gems (Jim Daniel). It is suspected to have originated in a UC expedition but losing its labeling during transportation back to the US a few decades ago. Daniel got it from Tom Juul, hence the name.

Note 3 The Matucana *pachanoi* was obtained from a collector providing material to Peruvian witches' markets. The plant collector has requested anonymity.

Note 4 This assay was flawed for mescaline but the material was reported devoid of any alkaloid.

Note 5 Agurell found tyramine was the major alkaloid with three minor alkaloids.

Note 6 An unidentified alkaloid was the major (0.093%):10 others were present.

Note 7 Agurell reported hordenine as the only detectable alkaloid.

Note 8 Reti & Castrillón found mescaline was sometimes absent from their higher alkaloid material.

Note 9 Agurell reported hordenine as the only detectable alkaloid.

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Material in this presentation was based and expands on a talk given at the Women's Visionary Congress.

The data in this table was assembled by Keeper Trout.
Any variation in facts between this and Ogunbodede *et al.* 2010 most likely reflects a correction or inclusion of additional data.
Please bring any errors to my attention.



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