

Compendium of terms describing Pyrethrum and related topics

TERMINOLOGY	MEANING
Pyrethrum	The <u>general</u> name for the insecticide derived from the pyrethrum flower, <i>Tanacetum cinerariifolium</i> . It can also mean the powdered flowers or the extract made from the flowers. It is correct to say ...” .. <i>Pyrethrum fields of daisy-like flowers can be seen in Tasmania ...</i> ” or ..”.. <i>We took delivery of ten 200 Kg. drums of Pyrethrum extract.</i> ”
Pyrethrins	This is always written with a capital letter “P”. It is the name of all the actives together which are present in pyrethrum. There are six of them , all very similar in extract. These can represent up to 55 % of the whole liquid extract. It is correct to say ...”... <i>The Pyrethrins content of BRA pyrethrum extract remains stable for many months ...</i> ”... or ...”... <i>The Pyrethrins content of this formulation is 0.25%...</i> ” ... The use of the singular term “Pyrethrin” to describe 6 Pyrethrins is discouraged.
Pyrethrins I & II	Written with capital “P” and the Roman numerals I and II this describes the two main classified groups. “Pyrethrins I” group are based on chrysanthemic acid and “Pyrethrins II” are based on pyrethric acid. These groups are assayed separately and their combined total yields the active content of the extract or formulation. (See: Pyrethrins ratio).
pyrethrin 1	Written with a small “p” and an Arabic “1”, this is one of the six distinct <u>individual</u> actives. It is based on chrysanthemic acid and forms part of Pyrethrins I
cinerin 1	Written with a small “c” and an Arabic “1”, this is one of the six distinct <u>individual</u> actives. It is based on chrysanthemic acid and forms part of Pyrethrins I
jasmolin 1	Written with a small “j” and an Arabic “1”, this is one of the six distinct <u>individual</u> actives. It is based on chrysanthemic acid and forms part of Pyrethrins I
pyrethrin 2	Written with a small “p” and an Arabic “2”, this is one of the six distinct individual actives. It is based on pyrethric acid and forms part of Pyrethrins II
cinerin 2	Written with a small “c” and an Arabic “2”, this is one of the six distinct individual actives. It is based on pyrethric acid and forms part of Pyrethrins II.

The Natural Australian Pyrethrum symbol is your guarantee of quality and safety in the insecticide products you buy.



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jasmolin 2	Written with a small “j” and an Arabic “2”, this is one of the six distinct individual actives. It is based on pyrethric acid and forms part of Pyrethrins II.
PYI/PYII Ratio	This is the ratio of the Pyrethrins I content to Pyrethrins II content in any pyrethrum extract. BRA extract PYI/PYII is around 1.0 to 1.2 which means there is similar amounts of Pyrethrins I and Pyrethrins II in their extract. There is a higher knockdown effect with Pyrethrins II than with Pyrethrins I. But Pyrethrins I has a higher kill effect.
Knockdown	This is the very fast paralyzing action of pyrethrum exerted on an insect which causes the insect to end up on the floor. Usually because an insect is balanced somewhat like a camera on a tripod, when it is knocked down, it ends on its back with its legs in the air. Statistically we can compare insecticide knockdown by determining the time it takes for 50 % of an insect population to become knocked down. Knockdown is expressed as KD50.
Kill	The ultimate purpose of Pyrethrum is to kill insect pests. Statistically we can compare insecticide kill properties by determining the Dose it takes to kill 50 % of the insect population. Kill is usually expressed as LD50. Often the 90% kill is quoted and expressed as LD90 though statistically this is less reliable for comparison purposes.
Synergist	A synergist is a compound which has little or no insecticidal action by itself but when combined with pyrethrum, will act to multiply the effect of pyrethrum, Often a synergist will be used at 1:5 or 1:10 ratio depending on the insect target(s). Synergists reduce the amount of pyrethrum necessary and reduce cost of the final formulation.
Synergist Ratio	The ratio of pyrethrum to synergist in a formulation. Thus 1:5 Pyrethrins/Piperonyl Butoxide means that for every 1 part of pyrethrins there are 5 parts of Piperonyl Butoxide.
Synergist Factor	The degree by which pyrethrum is enhanced by the addition of a synergist. Suppose you have a formulation of pyrethrum with a certain amount of synergist and found the action was 4 times of that without the synergist; you would say the synergist factor was 4. Alternatively you could say it provides an equal effect at ¼ of the unsynergised rate.