Cardiovascular activities of nitidine chloride from Zanthoxylum chalybeum have been compared with those of 9-methoxychelerythrine. Whereas nitidine chloride was found to show significant hypotensive activity in rabbits, 9-methoxychelerythrine chloride showed no hypotensive activity. The effect of nitidine chloride on isolated rabbit heart was also compared with those of adrenaline and acetylcholine. 9-Methoxychelerythrine, which has hitherto been regarded as an artefact formed by recrystallization of chelerythrine base from methanol, has been shown in this work to be a true natural constituent of Zanthoxylum chalybeum. Keywords: 9-methoxychelerythrine; nitidine chloride; cardiovascular properties; hypotensive effect; Zanthoxylum chalybeum.