# Chanca Piedra

Kidney Support

**Applications** 

- Antioxidant Support
- · Liver Support
- Blood Sugar Support
- · Gastrointestinal Support



#### Introduction

NutraMedix Chanca Piedra is a hydroethanol extract made from chanca piedra stem and leaf (*Phyllanthus niruri*). *P. niruri* belongs to the Euphorbiaceae family.¹ Latin synonyms include *Diasperus niruri*, *Niruris annua*, *Nymphanthus niruri*, or a variety of other *Phyllanthus* species, including *P. carolinianus*, *P. kirganelia*, and *P. lathyroides*.¹

Chanca piedra is often known as stone breaker, though it has many other common names. It is known as quebra pedras in Brazil,<sup>2</sup> gale-o-wind in New Guinea,<sup>3</sup> and meniran in Indonesia.<sup>4</sup> In the traditional health practices of India, chanca piedra is known as bhumyamalaki and is used for liver and gastrointestinal support.<sup>5</sup> It is also used traditionally for kidney support.<sup>1</sup>

Chanca piedra's constituents include alkaloids such as nirurine; benzenoids such as corilagin and gallic acid; coumarins such as ellagic acid; flavonoids such as quercetin, rutin, and kaempferol rhamnoside; lignans such as phyllanthin and niranthin; tannins such as geraniin; triterpenes such as limonene and phyllantheol; sterols such as beta-sitosterol; phytallates such as phyllester; lipids such as ricinoleic acid; and saponins such as diosgenin.<sup>6,7</sup>

NutraMedix Chanca Piedra is made at our U.S. manufacturing facility using a specialized proprietary extraction process that optimizes

the constituents of the herbs in their original, unprocessed state to obtain broad-spectrum concentration. Because our extracts are made in our own facility, we control all aspects of quality, including stringent ID testing, microbial testing, and heavy-metal testing. NutraMedix rigorously follows current good manufacturing practices (cGMPs), as do our suppliers.

#### Kidney Support

In a meta-analysis of two human studies examining the use of **chanca piedra** for kidney support, researchers concluded that the beneficial effects warranted further study. In a human study with 150 participants, a standardized chanca piedra extract taken for three months helped maintain normal urinary flow.

In another human study, 69 participants were randomly assigned to chanca piedra or a placebo. Compared to the placebo, chanca piedra helped maintain urinary calcium levels already within the normal range. And in a smaller human study with 56 participants, a chanca piedra infusion helped maintain urinary magnesium, potassium, uric acid, and oxalate levels already within the normal range.

In rat studies, chanca piedra has been shown to help with kidney support. 12-14 In one rat study using an aqueous leaf extract for 28 days, chanca piedra helped maintain creatine clearance (CrCl),

blood urea nitrogen (BUN), uric acid, and urine protein levels already within the normal range. 13

In another rat study, a methanol extract of chanca piedra helped maintain xanthine oxidase and uric acid levels already within the normal range. The uric acid finding was attributed to the phyllanthin, hypophyllanthin, and phyltetralin constituents in chanca piedra, with phyllanthin comparable to the positive control.

## Antioxidant Support

Chanca piedra ethanol and aqueous extracts may help with antioxidant support, as quantified by DPPH, FRAP, and ABTS assays in vitro. The antioxidant support is attributed to the constituent phenolic acids (chlorogenic and ellagic acids) and flavonoids.

In a rat study, high doses of chanca piedra (25-200 mg/kg) helped maintain superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GPx), and glutathione reductase (GR) levels already within the normal range. 17

In a randomized, controlled human trial, 71 patients were assessed at baseline, 2 weeks, and 4 weeks. The group assigned to dried, wholeherb chanca piedra extract experienced a significant increase in total antioxidants at the end of week 4.19 In a very small human study with five participants, chanca piedra tea helped support gallic and ascorbic acid levels, though not catalase or superoxide dismutase levels, already within the normal range.20

# Liver Support

Chanca piedra may help with liver support, attributed to the constituents corilagin, kaempferol rhamnoside, brevifolin, quercetin, and gallic acid.\*<sup>17</sup>

In one rat study, a 50% methanolic extract of chanca piedra helped maintain hepatic tissue health, hepatic cholesterol, total cholesterol, LDL cholesterol, alanine aminotransferase (ALT), alkaline phosphatase (ALP), insulin, hepatic triglyceride, and hepatic malondialdehyde (MDA) levels already within the normal range. In another rat study, chanca piedra aqueous extract helped maintain aspartate transaminase (AST), alanine

transaminase (ALT), alkaline phosphatase (ALP), and lactate dehydrogenase (LDH) already within the normal range.<sup>17</sup>

In vitro, a 50% methanolic chanca piedra extract helped maintain cholesterol micellization, pancreatic lipase, and alpha-glucosidase levels already within the normal range.<sup>7</sup>

#### Other Support

#### **Blood-Sugar Support**

Chanca piedra is used traditionally to maintain healthy blood-sugar levels already within the normal range.

In a rat study, a methanolic extract of chanca piedra helped maintain blood glucose, post-prandial blood glucose, hemoglobin A1c, and liver glycogen content already within the normal range.<sup>21</sup>

In vitro studies show that chanca piedra may help maintain levels of alpha-amylase and alpha-glucosidase already within the normal range, supporting normal glucose absorption and storage. The alpha-glucosidase support is attributed to the chanca piedra constituents corilagin and repandusinic acid A. Another in vitro study revealed that a 50% methanolic chanca piedra extract helps maintain insulin signaling already within the normal range.

#### **Gastrointestinal Support**

Chanca piedra is traditionally used for gastrointestinal health.

In a rat study, chanca piedra methanolic leaf extract helped maintain healthy gastric mucosal tissue in a dose-dependent manner, compared to the control. <sup>24</sup> In vitro studies with an aqueous extract showed gastrointestinal microbial support while maintaining *Lactobacillus* already within the normal range. <sup>25</sup>

### Safety and Cautions

Chanca piedra is generally well tolerated, though gastrointestinal effects such as nausea or vomiting are possible.<sup>1</sup>

Chanca piedra should not be used in pregnancy, as animal studies have found that it may have

contraceptive effects or may cause birth defects in high doses.<sup>1</sup> One study showed that high-dose chanca piedra decreased fertility in male rats.<sup>26</sup>

Theoretically, chanca piedra may have additive effects with anticoagulant, antiplatelet, or diuretic medications. For individuals taking pharmaceutical lithium, it may reduce lithium excretion.<sup>1</sup>

Safety is not documented in breastfeeding or pregnant women, or in children under age 3, due to insufficient safety research.

\*This statement has not been evaluated by the Food and Drug Administration. This product is not intended to treat, cure, or prevent any diseases.

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