

## APPLICATIONS

- Antioxidant Support
- Detox Support
- Immune System Support
- Blood Glucose Support
- Microbial Support
- Inflammatory Response Support
- Digestive Support



## INTRODUCTION

**Parsley** is a hydro-ethanol extract from the stems and leaves of *Petroselinum crispum*. Parsley is a biennial plant that is part of the Apiaceae/Umbelliferae family and is thought to have originated in the Mediterranean region.<sup>1</sup> Synonyms for *P. crispum* include *Petroselinum hortense*, *Petroselinum sativum*, *Petroselinum vulgare*, *Apium petroselinum*, *Apium crispum*, and *Carum petroselinum*.<sup>2</sup>

*P. crispum* contains phenolic compounds and flavonoids including apigenin, apiin, luteolin, chrysoeriol, quercetin, and isorhamnetin.<sup>3</sup> *P. crispum* also contains the essential oils myristicin and apiol; the carotenoids beta-carotene, lutein, violaxanthin, and neoxanthin; and coumarins.<sup>3,4</sup>

**Parsley** is made at our U.S. manufacturing facility. 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 (cGMP), as do our suppliers.

## ANTIOXIDANT SUPPORT

*P. crispum* may help to support and maintain a healthy cellular antioxidant enzyme system.<sup>5</sup> It may contribute antioxidant support, as quantified by DPPH assay and chemoluminescence.<sup>6,7</sup> Antioxidant support has also been quantified by beta-carotene bleaching assay.<sup>8</sup> The antioxidant activity is attributed to the phenolic components apiol, myristicin, and apiin.<sup>6,8</sup> While apiol and myristicin have similar chemical structures, apiol demonstrates more than five-fold the free radical scavenging activity of myristicin, though myristicin is the more abundant constituent.<sup>8</sup> In a rat study, *P. crispum* helped to maintain total antioxidant capacity and malondialdehyde levels already within the normal range.<sup>9</sup> In a randomized crossover trial with 14 healthy volunteers, seven women and seven

men, *P. crispum* supported statistically significant maintenance of superoxide dismutase (SOD) and erythrocyte glutathione reductase.<sup>10</sup>

## DETOX SUPPORT

*P. crispum* may contribute cleansing support and help ease Herxheimer-like reactions.\* It may help to support liver health through contributing antioxidant support and may help to maintain nitric oxide (NO) levels already within the normal range.<sup>11</sup> *P. crispum* may help to support urinary tract health through maintaining urinary pH already within the normal range.<sup>12,13</sup> It may also help to support and maintain liver health.<sup>14</sup>

## IMMUNE SYSTEM SUPPORT

*P. crispum* may help with immune support.<sup>15</sup> Preclinical studies suggest that *P. crispum* may help to support and maintain homeostasis of both cellular and humoral arms of adaptive immunity.<sup>15</sup>

## OTHER USES

### Blood Glucose Support

*P. crispum* may help to maintain blood glucose levels already within the normal range.<sup>16</sup> It may also help to maintain glycation already within the normal range.<sup>17</sup> During fructose metabolism, *P. crispum* may help to maintain levels of ketohexokinase-C already within the normal range.<sup>18</sup>

### Microbial Support

*P. crispum* may help with microbial support.<sup>19,20,21</sup> Microbial support has been determined by the agar well diffusion method.<sup>20,21</sup> While both cold water and hot water extracts may help with microbial support, the zone of inhibition for the tested organisms was greatest with the hot water extract of *P. crispum*.<sup>20</sup> In a seed extract of *P. crispum*, the zones of inhibition were, in some cases, comparable to positive control.<sup>21</sup>

### Inflammatory Response support

*P. crispum* may help with healthy inflammatory response support.<sup>22</sup> In a rat study, the ethanolic extract of *P. crispum* was shown to help with healthy hepatic inflammatory response support; this was partly attributed to antioxidant activity.<sup>14</sup>

### Digestive Support

*P. crispum* may help with digestive support.\* It may help to support and maintain healthy gastrointestinal mucosa as well as normal stool consistency.<sup>23,24</sup>

## SAFETY AND CAUTIONS

*P. crispum* is generally recognized as safe (GRAS) in the U.S. and is usually well tolerated.<sup>25</sup> It is a source of salicylates.<sup>2</sup> *P. crispum* may have estrogenic effects comparable to that found in the isoflavone glycosides of soybeans.<sup>26</sup> There have been cases of rare allergic reactions to *P. crispum*, including anaphylaxis.<sup>27,28</sup> According to animal research, it may have antiplatelet effects; this may have additive effects with antiplatelet drugs and/or anticoagulants.<sup>29</sup> It may also have hypoglycemic effects, which may have additive effects with hypoglycemic medications.<sup>30</sup> *P. crispum* may have an aquaretic effect, which may interfere with diuretic therapy.<sup>31</sup> It has been shown to prolong the effects of pentobarbital in animal studies.<sup>32</sup> *P. crispum* may inhibit cytochrome P450 (CYP1A2) which may inhibit levels of CYP1A2 substrates.<sup>33</sup> It is rich in vitamin K and high doses may interfere with warfarin therapy.<sup>34</sup> *P. crispum* is contraindicated in pregnancy, due to antifertility effects attributed to apiol.<sup>35</sup> It is also contraindicated in inflammatory kidney conditions.<sup>36</sup>

Safety not documented in breastfeeding or pregnant women, or in children under 3 years of age 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.**

**NutraMedix** 

**SHAKE WELL BEFORE EACH USE:**  
Put 10 drops in 4 oz (120mL) of water and wait one minute before drinking. May be taken several times per day, or for maximum support every 15 minutes, or as directed by your physician. Do not use if pregnant or nursing. Stop use if adverse reactions develop. Keep out of reach of children.

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.



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**PARSLEY**

**ANTIOXIDANT/DETOX SUPPORT †**

**Dietary Supplement**

**1 fl oz. (30mL)**

**Supplement Facts**

Serving Size 10 drops  
Servings Per Container 60

| Amount Per Serving            |         |
|-------------------------------|---------|
| Parsley leaf and stem extract | 0.5 mL† |
| †Daily Value not established  |         |

**Other ingredients:** mineral water, ethanol (20-24%)

**NutraMedix** 

Jupiter, Florida 33458 USA  
www.nutramedix.com  
561-745-2917

V000000  
Lot #  
Exp.

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