**Supplementary Table 1: Ingredients of formula I**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Plant name | Produced from | Dosage (g) | Biological/Pharmacological Activity | Active Components |
| Astragalus | Dry rhizoma | 30 | Anti-fatigue, exercise-induced anti-fatigue([Kuo et al., 2009](#_ENREF_23); [Yeh et al., 2014](#_ENREF_58)) | Astragalus flavonoids([Kuo et al., 2009](#_ENREF_23); [Yeh et al., 2014](#_ENREF_58)) Formononetin([Wu et al., 2016](#_ENREF_50)) |
| Codonopsis pilosula | Dry rhizoma | 9 | Immune modulatory([Yongxu and Jicheng, 2008](#_ENREF_59))  Anti-tumor([Fu et al., 2016](#_ENREF_11))  Anti-gut damage([Zhou et al., 2016](#_ENREF_65)) | Polysaccharides, saponins, sesquiterpenes, polyphenolic glycosides, alkaloids, polyacetylenes, essential oils and phytosteroids,([Wang et al., 1995](#_ENREF_48)) codonolactone([Fu et al., 2016](#_ENREF_11)) |
| Atractylodes macrocephala | Dry rhizoma | 12 | Inhibit the ovalbumin (OVA)-mediated allergic diarrhea stimulation of the Th1-type immune responses([Kim et al., 2005](#_ENREF_21))  Reduce diarrhea frequency([Huang et al., 2012](#_ENREF_17))  Anti-inflammatory([Li et al., 2007](#_ENREF_28)) | Atractylenolide, Atractylodes macrophala koidz Polysaccharides([Li et al., 2007](#_ENREF_28)) |
| Poria cocos | Dry sclerotia | 15 | Antioxidant([Tang et al., 2014](#_ENREF_44))  Anti-inflammatory([Jeong et al., 2014](#_ENREF_19)) | Triterpenes([Cheng et al., 2013](#_ENREF_7); [Lee et al., 2017](#_ENREF_27)) |
| Epimedium | Herbal | 15 | Anti-fatigue([Wang et al., 2014](#_ENREF_45))  Antioxidant([Zhao et al., 2014](#_ENREF_64)) | Icariin([Wang et al., 2014](#_ENREF_45))  Phenolic compounds ([Zhao et al., 2014](#_ENREF_64)) |
| Trigonella foenum-graecum | Dry seed | 15 | Antioxidant([Kaviarasan et al., 2007](#_ENREF_20))  Enhanced endurance by the utilization of fatty acids as an energy source([Ikeuchi et al., 2006](#_ENREF_18))  Ameliorates various impairments associated with physical fatigue([Kumar et al., 2013](#_ENREF_22)) | Isoleucine polyphenol, flavonoid, and amino acid contents([Kumar et al., 2013](#_ENREF_22)) |
| Psoralea corylifolia L. | Fruit | 12 | Anti-depressant([Chen et al., 2005](#_ENREF_5))  Anti-tumor([Lv and Liu, 2017](#_ENREF_32)) | Coumarin, flavonoids, terpene phenolic([Xu et al., 2012](#_ENREF_54)) |

**Supplementary Table 2: Ingredients of formula II**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Plant name | Produced from | Dosage(g) | Biological/Pharmacological Activity | Active Components |
| Radix adenophorae | Dry rhizoma | 30 | Suppressed development on inflammation and decreased airway damage by suppressing T cell activity, eosinophilia, and bronchial hyperresponsiveness([Roh et al., 2008](#_ENREF_39))  Enhanced the immune function and protect against exogenous pathogens by activating macrophages([Li et al., 2016](#_ENREF_29)) | Radix Adenophorae Polysaccharide([Li et al., 2016](#_ENREF_29)) |
| Glehnia littoralis | Dry rhizoma | 30 | Promotes neurogenesis([Park et al., 2018](#_ENREF_37))  Anti-tumor([Wu et al., 2018](#_ENREF_49)) | 1-linoloyl-3-palmitoylglycerol, facarindiol, panaxynol, isoimperatorin, β-sitosterol, scopoletin, and umbelliferone([Su et al., 2013](#_ENREF_42)) |
| Radix asparagi | Dry rhizoma | 15 | Anti-inflammatory([Lee et al., 2009](#_ENREF_26))  Stimulation of salivary secretion Xerostomia([Murakami et al., 2009](#_ENREF_36)) | Saponin([Sung et al., 2017](#_ENREF_43)) |
| Ophiopogon japonicus | Dry rhizoma | 15 | Stimulation of salivary secretion([Murakami et al., 2009](#_ENREF_36))  Antioxidant and immunoregulatory([Xiong et al., 2011](#_ENREF_53)) | Homoisoflavonoids ([Chang et al., 2002](#_ENREF_1)) |
| Lilium brownii | Scale leaf | 15 | Enhanced the immune function([Hou et al., 2016](#_ENREF_15))  Anti-tumor([Han and Xie, 2013](#_ENREF_13))  Anti-fatigue([Chun-Lian et al., 2009](#_ENREF_8)) | Lily polysaccharide ([Han and Xie, 2013](#_ENREF_13)) |
| Ligustrum lucidum | Fruit | 12 | Anti-tumor([Hu et al., 2014](#_ENREF_16))  Anti-osteoporosis([Che and Wong, 2015](#_ENREF_2))  Anti-inflammatory([Yoon et al., 2010](#_ENREF_60)) | Polysaccharides([Yoon et al., 2010](#_ENREF_60))  Ursolic acid([Xia et al., 2012](#_ENREF_51)) |

**Supplementary Table 3: Ingredients of formula III**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Plant name | Produced from | Dosage (g) | Biological /Pharmacological Activity | Active Components |
| Prunella vulgaris L. | Dry spikes | 7.5 | Anti-tumor([Han et al., 2018](#_ENREF_14))  Anti-inflammatory([Rocha et al., 2015](#_ENREF_38))  Stimulates macrophage activation ([Han et al., 2009](#_ENREF_12))  Enhances apoptosis([Moon et al., 2010](#_ENREF_35))  Against aging([Zhang et al., 2018](#_ENREF_62)) | Rosmarinic, ellagic, and caffeic acids([Lamaison et al., 1991](#_ENREF_25))  Phenolic acids, flavonoids, coumarins, triterpenes, volatile oil, polysaccharides([Feng et al., 2010](#_ENREF_9); [Moon et al., 2010](#_ENREF_35)) |
| Arisaema heterophyllum Blume | Dry rhizoma | 15 | Anti-tumor, apoptosis, and autophagy ([Feng et al., 2016](#_ENREF_10)) | Glycerol monostearic acid, ß-sitosterol, daucosterol, and succinic acid([Yang et al., 2003](#_ENREF_55)) |
| Rhizoma amorphophalli | Dry tubers | 15 | Anti-tumor([Sawai et al., 2018](#_ENREF_40)) ([Mingxiang, 2014](#_ENREF_34)) | Konjac glucomannan([Mingxiang, 2014](#_ENREF_34)) |
| Cremastra appendiculata | Dry pseudobulb | 7.5 | Anti-tumor([Liu et al., 2016](#_ENREF_31)) | Biphenanthrenes([Liu et al., 2016](#_ENREF_31)) |
| Euphorbia helioscopia | Herbal | 7.5 | Anti-tumor([Cheng et al., 2015](#_ENREF_6)) | Jatrophane-type diterpenoids([Shang et al., 2011](#_ENREF_41))  Diterpenoids([Mai et al., 2018](#_ENREF_33)) |
| Selaginella doederleinii Hieron | Herbal | 15 | Anti-tumor([Yao et al., 2017](#_ENREF_56))  Anti-inflammatory, antioxidant, anti-fungal, and anti-virus activity([Li et al., 2014](#_ENREF_30)) | Biflavonoids([Li et al., 2014](#_ENREF_30)) |
| Salvia chinensis Benth | Herbal | 15 | Anti-tumor([Wang et al., 2017](#_ENREF_47)) | Total flavonoids([Xiang et al., 2013](#_ENREF_52))  Protocatechualdehyde([Wang et al., 2017](#_ENREF_47)) |
| Paris polyphylla | Dry rhizoma | 7.5 | Anti-tumor([Wang et al., 2016](#_ENREF_46)) | Polyphyllin VII([Zhang et al., 2016](#_ENREF_61)) |
| Jujube date | Fruit | 4.5 | Stimulated erythropoietin([Chen et al., 2014b](#_ENREF_4); [Lam et al., 2016](#_ENREF_24))  Antioxidative, anti-tumor([Ye and Son, 2012](#_ENREF_57))  Anti-fatigue([Zhang and Mao-Dong, 2006](#_ENREF_63))  Anti-inflammatory([Chen et al., 2014a](#_ENREF_3)) | Polysaccharides([Zhang and Mao-Dong, 2006](#_ENREF_63)) |

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