The ACTIVES FACTORY

Birchula™

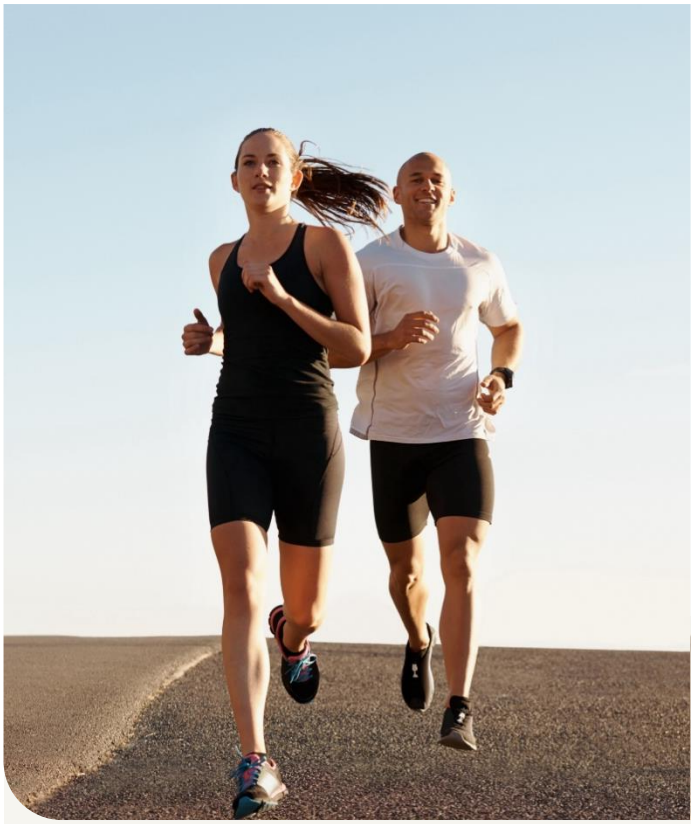
Birch bark extract for cardio metabolic disorders

Birchula™ birch bark extract contains highly effective triterpenes, Betulin, Betulinic Acid, Betulin Caffeates, and lupeol. These compounds are scientifically proven to reduce inflammation, improve cardiometabolic health, reduce cholesterol, improve glucose uptake and control blood sugar.

Scientifically proven benefits of birch bark extract

- Reduces inflammation B, BA, L
- Triggers the release of GLP-1 BA
- Controls carbohydrate metabolism BBE
- Anti-oxidant B, BA, L
- Controls blood sugars B, BA, L
- Improves glucose uptake B
- Reduces cholesterol B, L
- Lowers cardiac lipid levels B

(B) Betulin, (BA) betulinic acid, (L) lupeol, (BBE) birch bark extract



- Birchula™ Birch Bark Extract comes from the outer bark of the North American birch tree (Betula Papyrifera)
- Upcycled from the waste bark of the paper and timber industries, not peeled from live trees.
- Obtained from sustainably harvested and managed forests certified through the Sustainable Forestry Initiative (SFI)
- Proprietary technology for safe cGMP processing
- Identity preserved - Can trace the supply chain back to when the tree was harvested

The Actives Factory

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The Actives Factory is a manufacturer of natural extracts and high purity compounds from the North American White Birch for nutraceutical, cosmeceutical, and pharmaceutical use.

There is a distressing worldwide rise in the incidence of Type 2 diabetes and associated. There is compelling evidence that the triterpenes betulin, betulinic acid, and lupeol found in birch bark have beneficial effects on carbohydrate and lipid metabolism, as well as insulin function. dyslipidemia, heart disease, and obesity.

Research and methods of action

Positive impact of birch bark triterpenes on carbohydrate metabolism

- Betulinic Acid inhibits PTP1B improving sensitivity to leptin, an anti-obesity hormone.(1)
- Betulinic acid promotes energy expenditure by triggering the release of GLP-1 (10,11)
- Betulin stimulates glucose uptake at about 20% of the effect of Insulin. (12)
- Betulinic Acid impedes the breakdown of complex carbohydrates into simple sugars (12,13)

Birch bark triterpenes affect lipid metabolism and modification

- Betulinic Acid restricts fatty acid uptake from food[2]
- Lupeol inhibits the fatty acid synthase enzyme[3]
- Betulinic Acid promotes lipid breakdown by inhibiting cAMP-dependent phosphodiesterase[4]
- Betulin and Betulinic Acid inhibits sterol regulatory element binding proteins (SREBP) improving hyperlipidemia, insulin resistance and reducing atherosclerotic plaque.[5, 6]
- Betulinic acid promotes the efflux of lipid from these foam cells reducing the risk of atherosclerosis[7]
- Birch bark triterpenes inhibit the oxidation of "bad" low-density lipoprotein to form oxLDL[8], which contributes to atherosclerotic plaque formation[9]

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13 Kumar S, Kumar V, Prakash O. Enzymes inhibition and antidiabetic effect of isolated constituents from Dillenia indica. Biomed Res Int. 2013;2013:382063.