

Figure S1: Screw profile used for *Sargassum* pre-treatment by twin screw extrusion

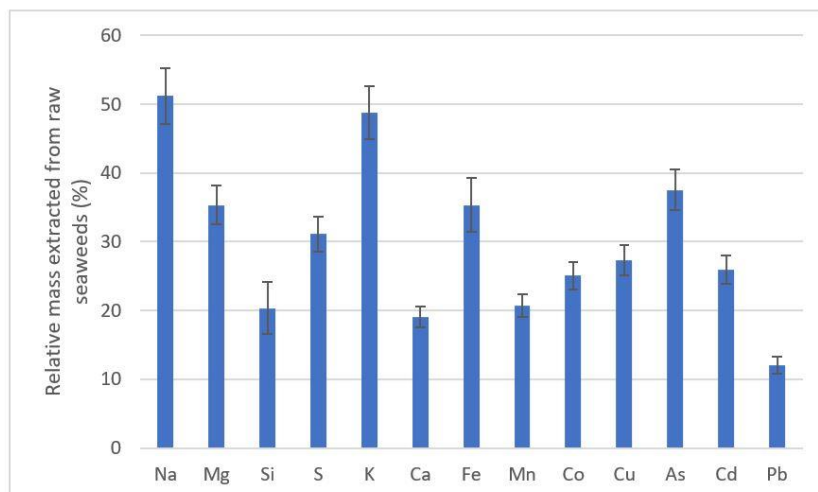


Figure S2: Elements extracted from raw seaweeds by twin-screw extrusion with water

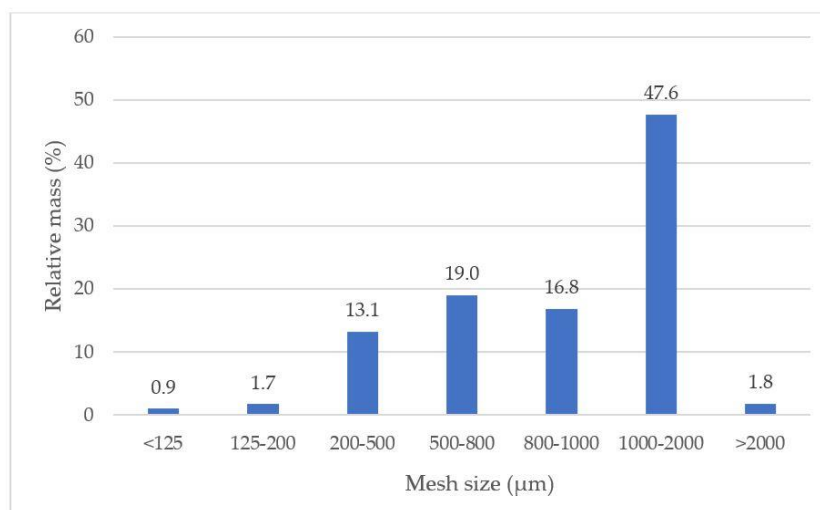


Figure S3: Particle size distribution in the extrudate

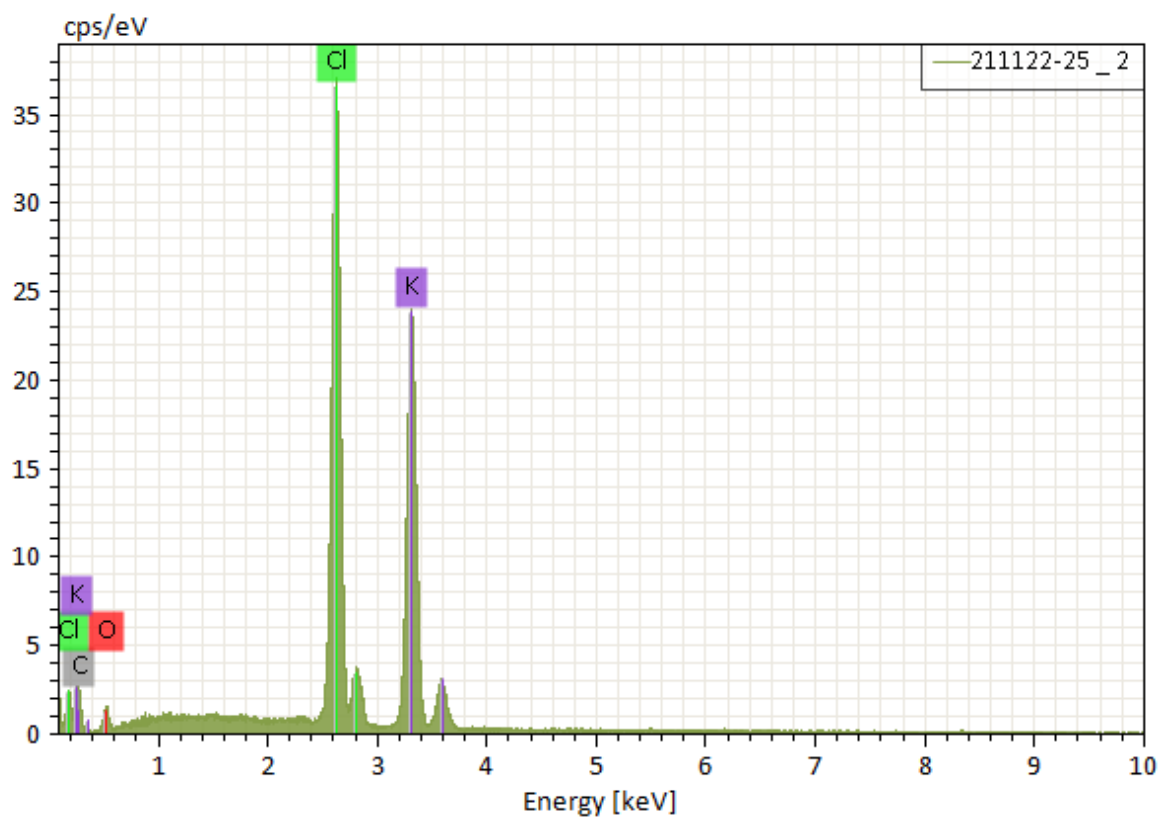


Figure S4: Elemental analysis of the particles observed at the surface of a particleboard by SEM

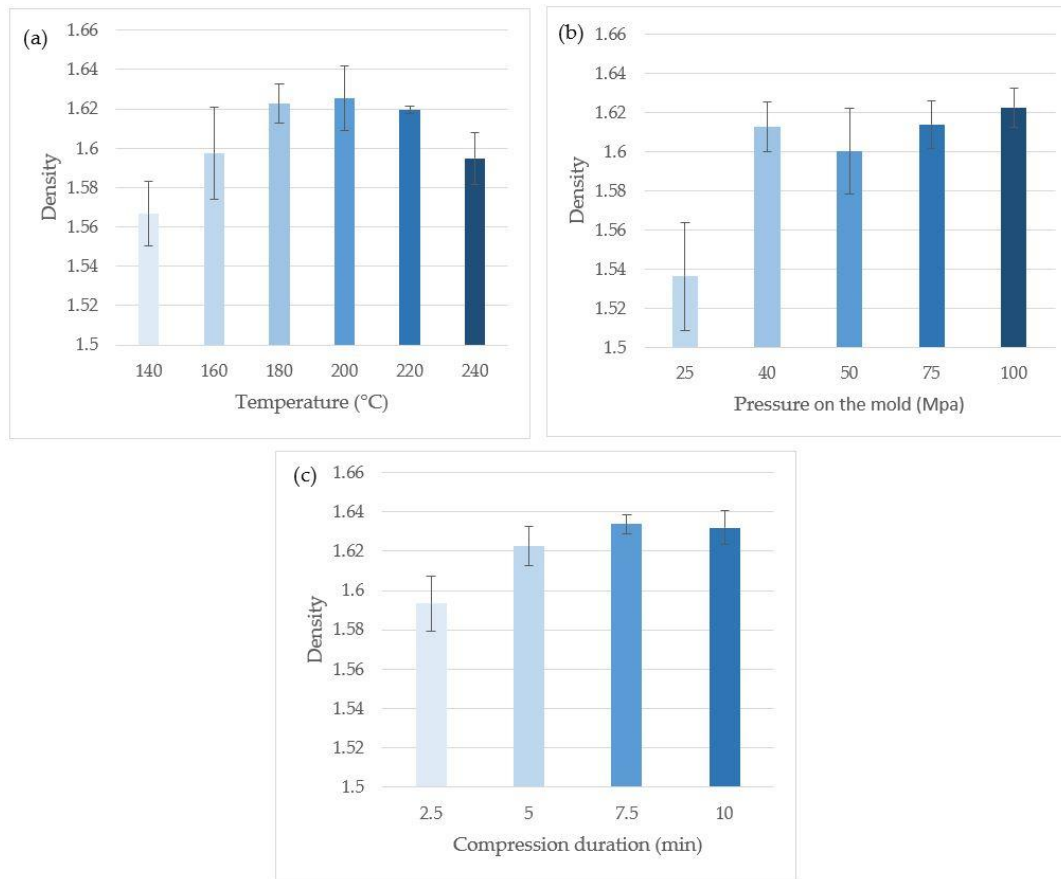


Figure S5: Influence of Temperature (a), pressure on the mold (b) and compression duration (c) on the density of *Sargassum*-based materials

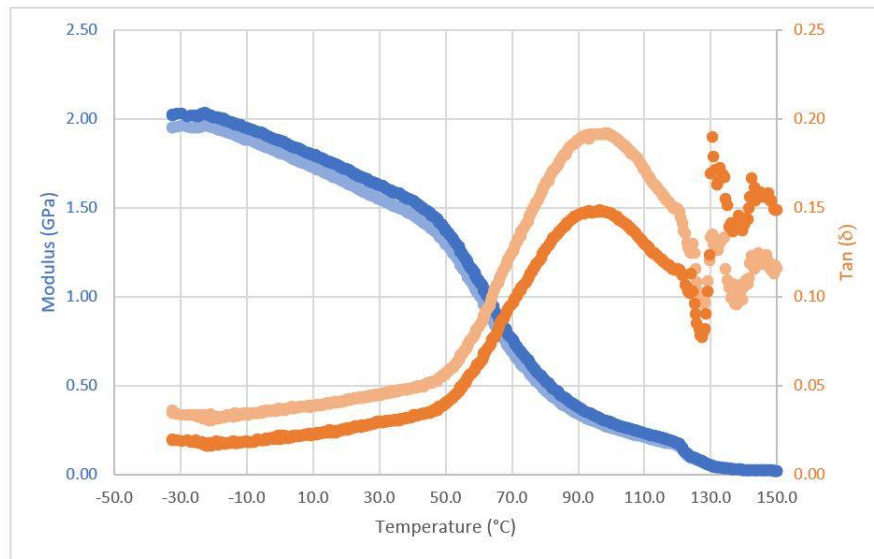


Figure S6: DMA analysis of a particleboard obtained with the best experimental conditions (200 °C, 100 Mpa, 7.5 min) (Lighter shade: 1 Hz oscillation, darker shade: 10Hz oscillation; blue: modulus, orange: loss modulus tan(δ))