

This is an Executive Summary of one of the ZEBRA-LIFE project deliverables of Year one.

1. FINAL DESIGN AND DETAILED ENGINEERING OF THE WHOLE SOLUTION PERMITTING AND AGREEMENTS

1.1. EXECUTIVE SUMMARY

The aim of this report is to show an overview of the basic design and configuration of the ZEBRA-LIFE pilot plant able to process 20 kg/h of technical kraft lignin, lignin liquor or black liquor for its conversion, isolation, and purification into additives.

The pilot plant includes the following processing units: lignin depolymerization – functionalization reactor and downstream. The definition of each process unit, capacities, energy demand and scale has been done based on the mass and energy balances previously calculated by CENER. The plant will be located at the Biorefinery and Bioenergy Centre (BIO2C) in Aoiz (Navarra, Spain) and will be in operation at the end of April 2025