

RAW MATERIALS CONSUMPTION

Each Grifols division consumes different materials, according to its respective production processes.

Grifols relies on procedures during the research and development stage to identify future environmental aspects and evaluate eco-efficiency criteria applicable to new products, with the goal of reducing their environmental impact.

BIOSCIENCE DIVISION

The primary raw material used in this division is the plasma required to manufacture blood-derived medicines. Ethanol, polyethylene glycol and sorbitol, among other materials, are used in fractionation and purification of the various plasma proteins.

57.6% of the ethanol consumed in the production process is recovered in the distillation towers and reused at the Clayton, North Carolina and Parets del Vallès, Barcelona facilities. The remaining ethanol needed to carry out the fractionation process is purchased.

Packaging for the product is mainly glass.

MAIN MATERIALS CONSUMED



1,414 METRIC TONS
SORBITOL



2,020 METRIC TONS
ETHANOL (purchased ethanol)



1,731 METRIC TONS
POLYETHYLENE GLYCOL








190 METRIC TONS
GLASS PACKAGING

ENVIRONMENTAL PERFORMANCE

RAW MATERIALS CONSUMPTION

In 2015, the ethanol distillation tower at the Bioscience Division's Los Angeles facility was validated. The decrease in water-alcohol solution waste is a result of the start-up of this new equipment. A greater reduction in this waste is expected when the ethanol can be incorporated into the production process.

ETHANOL CONSUMPTION

		2013	2014	2015	Variation
	WATER ALCOHOL SOLUTION TREATED (≈30%) (LITERS)	15,730,403	15,989,210	17,574,753	↑ 9.9%
	ETHANOL RECOVERED FOR THE PRODUCTION PROCESS (LITERS)	4,719,121	4,796,763	5,272,426	↑ 9.9%
	ETHANOL PURCHASED (LITERS)	4,277,175	4,183,807	3,882,348	↓ 7.2%
	ETHANOL USED IN MANUFACTURING (LITERS)	8,996,296	8,980,570	9,154,774	↑ 1.9%
	WATER ALCOHOL SOLUTION MANAGED AS WASTE (METRIC TONS)	5,849	4,923	2,226	↓ 54.8%

RAW MATERIALS CONSUMPTION

DIAGNOSTIC DIVISION

The primary raw material used in production of DG Gel© diagnostic cards is the plastic in the card itself.

PVC is used for manufacturing blood collection bags for the collection and storage of blood.

MAIN MATERIALS CONSUMED



34,518 UNITS
CIRCUIT BOARDS



22 METRIC TONS
PLASTIC REAGENT PACKAGING



353 METRIC TONS
PVC PELLETS



195 METRIC TONS
PP PLASTIC CARDS



208,076 LITERS
RED CELL REAGENTS



342 METRIC TONS
FLAT TUBES AND PVC SHEETS



16 METRIC TONS
GLASS PACKAGING

HOSPITAL DIVISION

In 2015, polypropylene used for manufacturing bags for IV solutions was the main raw material consumed by this division. The remaining materials are associated with production of saline and glucose solutions.

MAIN MATERIALS CONSUMED



543 METRIC TONS
PP (PELLETS AND FLAT TUBES)



185 METRIC TONS
SODIUM CHLORIDE



272 METRIC TONS
GLUCOSE



1,714 METRIC TONS
GLASS PACKAGING

Paper is one of the raw materials consumed in all of Grifols' activities. In 2015, paper consumption rose by 24.8% in absolute values due to the inclusion of data from the Emeryville, California production center, which was acquired recently. In relative values, paper consumption per employee was 14 kg, an 18.5% increase on the previous year. Consumption of paper manufactured from recycled paper pulp rose 19.9%, representing 36.9% of all paper consumed.

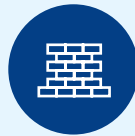
RAW MATERIALS CONSUMPTION

LEED CERTIFICATION OF THE BIOSCIENCE DIVISION'S NEW RAW MATERIALS STORAGE FACILITY IN CLAYTON, NORTH CAROLINA

In June 2015, this new facility came on line, providing increased raw materials storage space at the Clayton, North Carolina plant. This storage facility was the first in Johnston County to get LEED (Leadership in Energy and Environmental Design) certification, a credential sponsored by the [US Green Building Council \(USGBC\)](#).

The LEED certificate recognizes those buildings which have been designed and constructed according to various sustainability criteria, such as: efficient use of water and energy; atmospheric emissions; type of materials used; environmental quality; and innovation.

PRIMARY SUSTAINABILITY CRITERIA IN THE NEW STORAGE FACILITY



MATERIALS USE

- 39.7% of construction materials were recycled
- 37% of construction materials were locally sourced



WASTE

- Separation at source of construction waste and recycling of 82% of waste generated



INTERNAL AIR QUALITY

- Design that reduces internal air quality issues and exposure of employees to chemicals and contaminants
- The paint, flooring, and adhesives comply with VOC emissions limits
- The wood and agricultural-fiber composites used inside the building do not contain added urea formaldehyde



SITE SUSTAINABILITY

- 5.3% of the parking spaces are set aside for low-emission and fuel-efficient vehicles
- Use of solar reflectance surfaces on roofs and building surfaces



WATER CONSUMPTION

- 38% reduction in potable water consumption



ENERGY AND EMISSIONS

- 30.9% reduction in energy requirements
- Zero CFC-based refrigerant gases