

**KAJIAN SISTEM PENGOLAHAN AIR LIMBAH BERBASIS  
MASYARAKAT DI PADUKUHAN KARANGGAYAM, KELURAHAN  
CATURTUNGAL, KECAMATAN DEPOK, KABUPATEN SLEMAN,  
DIY**

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**INTISARI**

Kajian ini bertujuan untuk mengetahui sistem pengolahan air limbah berbasis masyarakat (IPAL Sanimas) di Padukuhan Karanggayam, serta mengetahui kualitas air limbah sebelum dan sesudah diolah IPAL Sanimas.

Sanimas atau Sanitasi Berbasis Masyarakat adalah suatu konsep penyelenggaraan sanitasi air limbah rumah tangga atau domestik yang dibuat berdasarkan kebutuhan masyarakat melalui proses perencanaan, pemilihan teknologi, pembangunan, pengoperasian, dan pemeliharaan oleh masyarakat dengan pendampingan dari fasilitator. Kajian dilakukan melalui observasi langsung di lokasi RT 05 RW 01 Padukuhan Karanggayam dan pengujian laboratorium terhadap air buangan pada IPAL Sanimas di Balai Laboratorium Kesehatan Yogyakarta. Selanjutnya dilakukan pengambilan sampel air limbah pada inlet dan outlet IPAL, serta perhitungan efektifitas pengolahan limbah domestik Sanimas dari hasil pengujian di laboratorium

Dari hasil observasi di lapangan dan pengujian laboratorium dapat diketahui bahwa : (1) IPAL Komunal Sanimas pada RT 05 RW 01 Padukuhan Karanggayam menggunakan teknologi pengolahan *anaerobic baffled reactor* (ABR) dan *anaerobic filter* (AF). (2) berdasarkan hasil kajian diketahui presentase penurunan pH sebesar 0.69 %, BOD sebesar 72.76 %, COD sebesar 57.73 %, TSS sebesar 51.6 %, TDS sebesar 10.53 %, suhu sebesar 0 %, Deterjen sebesar – 5.89 %, DHL sebesar 10.27 %. (3) Berdasarkan hasil uji laboratorium dan analisis kualitas air mengacu pada Pergub DIY No 7 TH 2010 maka pengolahan limbah domestik Sanimas di Karanggayam telah memenuhi syarat standar baku mutu limbah domestik.

***Kata Kunci : Limbah domestik, IPAL Komunal, anaerobic baffled reactor, anaerobic filter***

**WASTE WATER TREATMENT SYSTEMS STUDY OF SANITATION**

## COMMUNITY-BASED KARANGGAYAM, CATURTUNGGAL, IN SUB DISTRICT DEPOK, DISTRICT OF SLEMAN, DIY

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### ABSTRACT

This study aims to determine the waste water treatment system of community-based (WWTP Sanimas) in Hamlet Karanggayam, as well as knowing the quality of the waste water before and after the treated wastewater SANIMAS.

Sanimas or community-based sanitation is a concept of organization of sanitary wastewater or domestic households are made based on the needs of the community through the process of planning, technology selection, construction, operation, and maintenance by the community with the assistance of the facilitator. The study was conducted through direct observation at RT 05 RW 01 Hamlets Karanggayam and laboratory testing of waste water at WWTP Sanimas in Yogyakarta Health Laboratory. Furthermore, the waste water sampling at inlet and outlet WWTP, as well as calculating of the effectiveness of domestic waste water treatment Sanimas of laboratory test results.

From the results of field observations and laboratory testing can be seen that: (1) Communal WWTP Sanimas at RT 05 RW 01 in Hamlet Karanggayam, using processing technology along with the *anaerobic baffled reactor* (ABR) and *anaerobic filter* (AF) (2) Based on the result of the study from the calculation of the percentage reduction in pH is known by 0.69 %, BOD is known by 72.76 %, COD off 57.73 %, 51.6% for TSS, TDS is known by 10.53 %, is known by 0 %, Deterjen off – 5.89 %, DHL is known by 10.27 %. (3) Based on laboratory test results and analysis of water quality refers to Governor of DIY Regulation No. 07 of 2010, the domestic wastewater treatment has qualified domestic wastewater quality standards.

**Key Words : Domestic waste, Communal WWTP, anaerobic baffled reactor, anaerobic filter**