

TechRate  
May, 2022



# SMART CONTRACTS SECURITY AUDIT REPORT



Techrate\_audits



Techrate



Techrate1

# Audit Details



Audited project

PlugPRO



Deployer address

0xa5735f50899b8ec23957893816c9345b130031ca



Client contacts:

PlugPRO team



Blockchain

Binance Smart Chain



Project website:

<http://Plugpro.me>

# Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the disclaimer below – please make sure to read it in full.

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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

# Background

**TechRate was commissioned by PlugPRO to perform an audit of smart contracts:**

<https://bscscan.com/address/0x2407CEd3c9fA576275A8f2871D67673e5Dea08ad#code>

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be used to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

# Contracts Details

## Token contract details for 06.05.2022

**Contract name** PlugPRO

**Contract address** 0x2407CEd3c9fA576275A8f2871D67673e5Dea08ad

**Total supply** 50,000,000,000

**Token ticker** \$PP

**Decimals** 9

**Token holders** 999

**Transactions count** 3,787

**Top 100 holders dominance** 77.49%

**Wallet two** 0x44caa136d110bc0bd552bffd175bc7298c23e024

**Team wallet** 0x57dd7ba2f9b051b85ede16570746991711d5af5e

**Taxes** 0/20/80/4/16/10

**Total LP BNB** 75499635207041004910

**Contract deployer address** 0xa5735f50899b8ec23957893816c9345b130031ca

**Owner address** 0xf864c446ae918499386d2c534eabbf5b195ae0b7

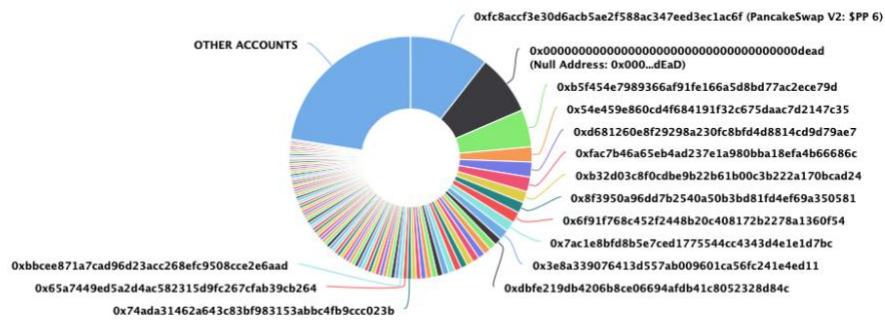
# PlugPRO Token Distribution

The top 100 holders collectively own 77.49% (38,743,565,763.86 Tokens) of PlugPro

Token Total Supply: 50,000,000,000.00 Token | Total Token Holders: 999

PlugPro Top 100 Token Holders

Source: BscScan.com



(A total of 38,743,565,763.86 tokens held by the top 100 accounts from the total supply of 50,000,000,000.00 token)

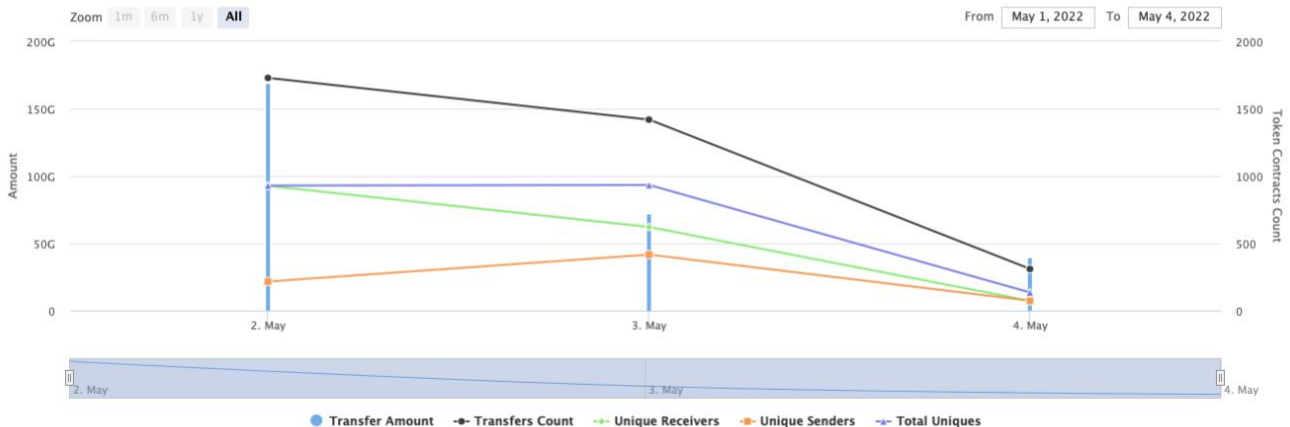
## PlugPRO Contract Interaction Details

Time Series: Token Contract Overview

Mon 2, May 2022 - Wed 4, May 2022

Token Contract 0x2407CEd3c9fA576275A8f2871D67673e5Dea08ad (PlugPro)

Source: BscScan.com



# PlugPRO Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	<a href="#">PancakeSwap V2: \$PP 6</a>	5,285,846,899.958286965	10.5717%
2	<a href="#">Null Address: 0x000...dEaD</a>	4,000,000,000	8.0000%
3	<a href="#">0xb5f454e7989366af91fe166a5d8bd77ac2ece79d</a>	2,499,999,319	5.0000%
4	<a href="#">0x54e459e860cd4f684191f32c675daac7d2147c35</a>	1,000,000,000	2.0000%
5	<a href="#">0xd681260e8f29298a230fc8bd4d8814cd9d79ae7</a>	999,999,999.312820392	2.0000%
6	<a href="#">0xfac7b46a65eb4ad237e1a980bba18efa4b66686c</a>	972,485,171.472900282	1.9450%
7	<a href="#">0xb32d03c8f0cdbe9b22b61b00c3b222a170bcad24</a>	758,843,265.11628918	1.5177%
8	<a href="#">0x8f3950a96dd7b2540a50b3bd81fd4ef69a350581</a>	734,475,174.933911091	1.4690%
9	<a href="#">0x6f91f768c452f2448b20c408172b2278a1360f54</a>	731,814,247.475369951	1.4636%
10	<a href="#">0x7ac1e8bfd8b5e7ced1775544cc4343d4e1e1d7bc</a>	679,697,860.617360346	1.3594%

# Contract functions details

## + [Int] IBEP20

- [Ext] totalSupply
- [Ext] decimals
- [Ext] symbol
- [Ext] name
- [Ext] getOwner
- [Ext] balanceOf
- [Ext] transfer #
- [Ext] allowance
- [Ext] approve #
- [Ext] transferFrom #

## + [Int] IPancakeERC20

- [Ext] name
- [Ext] symbol
- [Ext] decimals
- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] allowance
- [Ext] approve #
- [Ext] transfer #
- [Ext] transferFrom #
- [Ext] DOMAIN\_SEPARATOR
- [Ext] PERMIT\_TYPEHASH
- [Ext] nonces
- [Ext] permit #

## + [Int] IPancakeFactory

- [Ext] feeTo
- [Ext] feeToSetter
- [Ext] getPair
- [Ext] allPairs
- [Ext] allPairsLength
- [Ext] createPair #
- [Ext] setFeeTo #
- [Ext] setFeeToSetter #

## + [Int] IPancakeRouter01

- [Ext] addLiquidity #
- [Ext] addLiquidityETH (\$)
- [Ext] removeLiquidity #



- [Ext] removeLiquidityETH #
  - [Ext] removeLiquidityWithPermit #
  - [Ext] removeLiquidityETHWithPermit #
  - [Ext] swapExactTokensForTokens #
  - [Ext] swapTokensForExactTokens #
  - [Ext] swapExactETHForTokens (\$)
  - [Ext] swapTokensForExactETH #
  - [Ext] swapExactTokensForETH #
  - [Ext] swapETHForExactTokens (\$)
  - [Ext] factory
  - [Ext] WETH
  - [Ext] quote
  - [Ext] getamountOut
  - [Ext] getamountIn
  - [Ext] getamountsOut
  - [Ext] getamountsIn
- + [Int] IPancakeRouter02 (IPancakeRouter01)
- [Ext] removeLiquidityETHSupportingFeeOnTransferTokens #
  - [Ext] removeLiquidityETHWithPermitSupportingFeeOnTransferTokens #
  - [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
  - [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens (\$)
  - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #
- + Ownable
- [Pub] <Constructor> #
  - [Pub] owner
  - [Pub] renounceOwnership #
    - modifiers: onlyOwner
  - [Pub] transferOwnership #
    - modifiers: onlyOwner
- + [Lib] Address
- [Int] isContract
  - [Int] sendValue #
  - [Int] functionCall #
  - [Int] functionCall #
  - [Int] functionCallWithValue #
  - [Int] functionCallWithValue #
  - [Int] functionStaticCall
  - [Int] functionStaticCall
  - [Int] functionDelegateCall #
  - [Int] functionDelegateCall #
  - [Prv] \_verifyCallResult

+ [Lib] EnumerableSet

- [Prv] \_add #
- [Prv] \_remove #
- [Prv] \_contains
- [Prv] \_length
- [Prv] \_at
- [Int] add #
- [Int] remove #
- [Int] contains
- [Int] length
- [Int] at
- [Int] add #
- [Int] remove #
- [Int] contains
- [Int] length
- [Int] at
- [Int] add #
- [Int] remove #
- [Int] contains
- [Int] length
- [Int] at

+ PlugPro (IBEP20, Ownable)

- [Prv] \_isTeam
- [Pub] <Constructor> #
- [Prv] \_transfer #
- [Prv] \_taxedTransfer #
- [Prv] \_feelessTransfer #
- [Prv] \_calculateFee
- [Pub] isExcludedFromStaking
- [Pub] \_getTotalShares
- [Prv] \_addToken #
- [Prv] \_removeToken #
- [Prv] \_newDividendsOf
- [Prv] \_distributeStake #
- [Prv] claimBNB #
- [Prv] \_swapContractToken #
  - modifiers: lockTheSwap
- [Prv] \_swapTokenForBNB #
- [Prv] \_addLiquidity #
- [Pub] getLiquidityReleaseTimeInSeconds
- [Pub] getBurnedTokens
- [Pub] getLimits
- [Pub] getTaxes
- [Pub] getAddressSellLockTimeInSeconds

- [Pub] getSellLockTimeInSeconds
- [Pub] getAddressBuyLockTimeInSeconds
- [Pub] getBuyLockTimeInSeconds
- [Pub] AddressResetSellLock #
- [Pub] AddressResetBuyLock #
- [Pub] BNBWithdraw #
- [Pub] getDividends
- [Pub] TeamWithdrawALLMarketingBNB #
  - modifiers: onlyOwner
- [Pub] TeamWithdrawXMarketingBNB #
  - modifiers: onlyOwner
- [Pub] TeamSwitchManualBNBConversion #
  - modifiers: onlyOwner
- [Pub] TeamChangeAntiWhale #
  - modifiers: onlyOwner
- [Pub] TeamChangeTeamWallet #
  - modifiers: onlyOwner
- [Pub] TeamChangeWalletTwo #
  - modifiers: onlyOwner
- [Pub] TeamDisableSellLock #
  - modifiers: onlyOwner
- [Pub] TeamDisableBuyLock #
  - modifiers: onlyOwner
- [Pub] TeamSetSellLockTime #
  - modifiers: onlyOwner
- [Pub] TeamSetBuyLockTime #
  - modifiers: onlyOwner
- [Pub] AddWalletExclusion #
  - modifiers: onlyOwner
- [Pub] TeamSetTaxes #
  - modifiers: onlyOwner
- [Pub] TeamChangeMarketingShare #
  - modifiers: onlyOwner
- [Pub] TeamCreateLPandBNB #
  - modifiers: onlyOwner
- [Pub] TeamUpdateLimits #
  - modifiers: onlyOwner
- [Pub] SetupEnableTrading #
  - modifiers: onlyOwner
- [Pub] SetupLiquidityTokenAddress #
  - modifiers: onlyOwner
- [Pub] TeamUnlockLiquidityInSeconds #
  - modifiers: onlyOwner
- [Prv] \_prolongLiquidityLock #
- [Pub] TeamReleaseLiquidity #

- modifiers: onlyOwner
- [Pub] TeamRemoveLiquidity #
  - modifiers: onlyOwner
- [Pub] TeamRemoveRemainingBNB #
  - modifiers: onlyOwner
- [Ext] <Fallback> (\$)
- [Ext] <Fallback> (\$)
- [Ext] getOwner
- [Ext] name
- [Ext] symbol
- [Ext] decimals
- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] transfer #
- [Ext] allowance
- [Ext] approve #
- [Prv] \_approve #
- [Ext] transferFrom #
- [Ext] increaseAllowance #
- [Ext] decreaseAllowance #

(\$) = payable function

# = non-constant function

# Issues Checking Status

Issue description	Checking status
1. <b>Compiler errors.</b>	Passed
2. <b>Race conditions and Reentrancy. Cross-function race conditions.</b>	Passed
3. <b>Possible delays in data delivery.</b>	Passed
4. <b>Oracle calls.</b>	Passed
5. <b>Front running.</b>	Passed
6. <b>Timestamp dependence.</b>	Passed
7. <b>Integer Overflow and Underflow.</b>	Passed
8. <b>DoS with Revert.</b>	Passed
9. <b>DoS with block gas limit.</b>	Low issues
10. <b>Methods execution permissions.</b>	Passed
11. <b>Economy model of the contract.</b>	Passed
12. <b>The impact of the exchange rate on the logic.</b>	Passed
13. <b>Private user data leaks.</b>	Passed
14. <b>Malicious Event log.</b>	Passed
15. <b>Scoping and Declarations.</b>	Passed
16. <b>Uninitialized storage pointers.</b>	Passed
17. <b>Arithmetic accuracy.</b>	Passed
18. <b>Design Logic.</b>	Passed
19. <b>Cross-function race conditions.</b>	Passed
20. <b>Safe Open Zeppelin contracts implementation and usage.</b>	Passed
21. <b>Fallback function security.</b>	Passed

# Security Issues

## ✓ High Severity Issues

No high severity issues found.

## ✓ Medium Severity Issues

No medium severity issues found.

## ✓ Low Severity Issues

### 1. Out of gas

#### Issue:

- The function `_getTotalShares()` uses the loop to find and decrease shares from the `_excludedFromStaking` list. Function will be aborted with `OUT_OF_GAS` exception if there will be a long excluded addresses list.

#### Recommendation:

Check that the excluded array length is not too big.

## Owner privileges (In the period when the owner is not renounced)

- Owner can withdraw marketing balance.
- Owner can disable auto call of \_swapContractToken function.
- Owner can change antiWhale.
- Owner can change teamWallet and walletTwo addresses.
- Owner can disable sell/buy lock.
- Owner can exclude addresses.
- Owner can change sell/buy lock time.
- Owner can change taxes.
- Owner can change marketing share (percentage of BNB that goes to marketing).
- Owner can manually call \_swapContractToken function.
- Owner can enable trading(already called).
- Owner can change liquidity token address.
- Owner can increase \_liquidityUnlockTime.
- Owner can withdraw liquidity to team wallet if it is not locked.
- Owner can change balance and sell limits.
- Owner can remove liquidity.
- Owner can withdraw contract balance if it is not locked.

# Conclusion

Smart contracts contain low severity issues! Liquidity pair contract's security is not checked due to out of scope. The further transfers and operations with the funds raise are not related to this particular contract.

Liquidity locking details are NOT provided by the team.

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## *TechRate note:*

*Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.*