

# SAS: Can we use CONTAINS in PROC SQL?

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November 22, 2025

## RECOMMENDED CITATION

stats writer (2025). *SAS: Can we use CONTAINS in PROC SQL?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=99476>

No, CONTAINS is not a valid operator in PROC SQL. Instead, the LIKE operator can be used to perform pattern matching in PROC SQL, similar to the way that CONTAINS works in other SAS procedures.

You can use the **CONTAINS** operator in the **PROC SQL** statement in SAS to only return rows where a variable in a dataset contains some string pattern.

The following examples show how to use the **CONTAINS** operator in practice with the following dataset in SAS that contains information about various basketball players:

```
/*create dataset*/  
data my_data;  
input team $ points;  
datalines;  
Cavs 12  
Cavs 14  
Warriors 15  
Hawks 18  
Mavs 31  
Mavs 32  
Mavs 35  
Celtics 36  
Celtics 40  
;  
run;  
  
/*view dataset*/  
proc print data=my_data;
```

Obs	team	points
1	Cavs	12
2	Cavs	14
3	Warriors	15
4	Hawks	18
5	Mavs	31
6	Mavs	32
7	Mavs	35
8	Celtics	36
9	Celtics	40

### Example 1: Select Rows where Variable Contains One Pattern

We can use the **CONTAINS** operator in **PROC SQL** to select only the rows where the team contains the pattern 'avs' somewhere in the name:

```
/*select all rows where team contains 'avs'*/  
proc sql;  
select *  
from my_data  
where team contains 'avs';  
quit;
```

team	points
Cavs	12
Cavs	14
Mavs	31
Mavs	32
Mavs	35

Notice that only the rows where the team contains 'avs' somewhere in the name are returned.

## Example 2: Select Rows where Variable Contains One of Several Patterns

We can use the **CONTAINS** operator in **PROC SQL** to select only the rows where the team contains the pattern 'avs' or the pattern 'ics' somewhere in the name:

```
/*select all rows where team contains 'avs' or 'ics'*/  
proc sql;  
select *  
from my_data  
where team contains 'avs' or team contains 'ics';  
quit;
```

team	points
Cavs	12
Cavs	14
Mavs	31
Mavs	32
Mavs	35
Celtics	36
Celtics	40

Only the rows where the team contains 'avs' or 'ics' somewhere in the name are returned.

## Example 3: Select Rows where Variable Does Not Contain Pattern

The opposite of the **CONTAINS** operator in **PROC SQL** is **NOT CONTAINS**, which selects rows where some variable in a dataset does *not* contain a certain string pattern.

The following code shows how to use the **NOT CONTAINS** operator to select all rows where the team does not contain 'avs' in the name:

```
/*select all rows where team does not contain 'avs'*/  
proc sql;  
select *  
from my_data  
where team not contains 'avs';
```

**quit;**

team	points
Warriors	15
Hawks	18
Celtics	36
Celtics	40

Notice that only the rows where the team does not contain 'avs' somewhere in the name are returned.

The following tutorials explain how to perform other common tasks in SAS: